PCA Case No. 2016-39/AA641

In the Proceeding Between

Glencore Finance (Bermuda) Ltd.
(Claimant)

- VS -

The Plurinational State of Bolivia
(Respondent)

BOLIVIA'S REJOINDER ON QUANTUM

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8 June 2020

Members of the Tribunal:

Prof. Ricardo Ramírez Hernández
Prof. John Y. Gotanda
Prof. Philippe Sands

ESTADO PLURINACIONAL DE BOLIVIA
Procuraduría General del Estado

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1. Without prejudice to the Plurinational State of Bolivia's ("**Bolivia**" or the "**State**") jurisdictional and admissibility objections and defence on the merits, Bolivia hereby submits, pursuant to the Procedural Calendar adopted by the Tribunal on 5 June 2020, its Rejoinder on Quantum (the "**Rejoinder on Quantum**") in response to the Reply on Quantum filed on 22 January 2020 by Glencore Finance (Bermuda) Ltd. ("**Claimant**" or "**Glencore Bermuda**") (Claimant and Bolivia are jointly referred to herein as the "**Parties**").

2. Bolivia submits together with its Rejoinder on Quantum:

   a. Factual exhibits **R-391** to **R-528**, together with a consolidated list of factual exhibits;

   b. Legal authorities **RLA-202** to **RLA-220**, together with a consolidated list of legal authorities;

   c. The third witness statement of Eng Ramiro Villavicencio Niño de Guzmán, former Engineering and Projects Director of Sinchi Wayra and former general manager of the State company *Empresa Metalúrgica Vinto* ("**Villavicencio III**");

   d. [redacted];

   e. The second expert report of Prof Neil Rigby of SRK, Bolivia's mining expert in this arbitration ("**SRK II**");

   f. The second expert report of Dr Daniel Flores of Quadrant Economics, Bolivia's valuation expert in this arbitration ("**Quadrant II**"); and

   g. The second expert report of Architect Diego Mirones on the valuation of the Antimony Smelter ("**Mirones II**").

1. INTRODUCTION[1]

3. **Utterly opportunistic claims**. In its Statement of Defence and its Rejoinder on the Merits, Bolivia called out Claimant's claims for what they really are: an opportunistic attempt to use this investment arbitration as an insurance policy to cover for its reckless behaviour in acquiring and mismanaging the Colquiri mine (the "**Colquiri Mine**"), the Vinto tin smelter

[1] Unless otherwise indicated, the definitions adopted in Bolivia's previous submissions apply throughout this Rejoinder on Quantum.

(the "**Tin Smelter**") and the Vinto antimony smelter (the "**Antimony Smelter**") (jointly referred to as the "**Assets**").

4. **The truth comes out, eventually**. Despite Claimant's efforts to the contrary, the Hearing on the Merits held in Paris on 20-23 May 2019 confirmed that, back in 2004, Glencore International was fully aware of the risks inherent to the Assets it was acquiring in Bolivia from their then-owner, former President Gonzalo Sánchez de Lozada. Glencore International admitted being aware of the risks entailed by the identity of the Assets' seller, a disgraced former President fleeing from justice. Glencore International was also aware of the risks related to the operation of the Colquiri Mine, as it had identified that the former operator had a serious issue with *cooperativas* that constantly threatened to take over the Mine. [redacted]

[redacted]

6. The Hearing on the Merits also demonstrated that Claimant mismanaged the conflict between the *cooperativistas* and the workers at the Colquiri Mine. Claimant had progressively lost control of the Mine and did not reach out to Bolivia for assistance until the eleventh-hour, when the social conflict and violence were already out of control.

7. Finally, the Hearing also demonstrated that Bolivia had no intention of reversing the Mine Lease. Instead, Bolivia engaged in negotiations with the *cooperativas*, the workers and Sinchi Wayra to reach an agreement that would have protected Claimant's interests, but Claimant's

back-channel negotiations with one faction of the *cooperativa 26 de Febrero* by which it surrendered control of the Rosario Vein rendered any agreement impossible.

8. Similarly, the quantum-related document production has vindicated Bolivia's case. For instance, while Claimant continues to base its entire valuation of the Mine Lease on a single piece of paper dated July 2011 (*i.e.*, almost 1 year before the reversion of the Mine Lease) it calls the triennial plan (the "**Triennial Plan**"), Claimant has been – and continues to be – unable to produce any document showing approval of such Plan, despite the Tribunal's order during disclosure for Claimant to produce such documents. This confirms (once again) that, as Bolivia has maintained from the outset, the so-called Triennial Plan was purely aspirational and, by relying on it, Claimant's valuations are speculative at best.

9. **Causation is lacking**. Claimant does not offer any causation analysis for its FET and FPS claims for any of the Assets, which suffices to disregard any compensation claimed for these alleged Treaty breaches. As it pertains to its expropriation claims, Claimant only offers a causation analysis for the Mine Lease, but ignores that, as the Hearing on the Merits demonstrated, its own conduct was the triggering factor that caused the reversion of the Mine Lease – Bolivia only managed to restore social order once Claimant was gone from the Mine site. Claimant also chose to acquire the Tin Smelter from fleeing former President Sánchez de Lozada, despite the known irregularities in its privatization, and also failed to put the Antimony Smelter back in production and, as such, caused the incredible damages that it now seeks from Bolivia (**Section 3**).

10. **At every turn, Claimant inflates its claims**.

11. Claimant plays with the valuation dates contrary to its statements to the market only to avoid the Rosario Agreement. Claimant uses the valuation date of 29 May 2012 for the Colquiri Mine with the sole purposes of ignoring the Rosario Agreement (executed shortly after), despite this being wholly inconsistent with Claimant's disclosures to the market, where it stated that "*[t]he Colquiri mine was [only] nationalised on 22 June 2012*".[2] Had Claimant lost control of its investment on 29 May 2012, as it contends in this arbitration, it would have informed so to the market. It did not. Claimant's position is legally and factually flawed, and is also contrary to the applicable compensation standard under the Treaty (**Section 2**).

12. Claimant's "magical" mine defies credulity. Bolivia explained its Statement of Defence that "*Claimant's experts have gone into making assumptions (most likely on instruction of Claimant) that are so far removed from reality that they appear to be valuing a 'magical*

[2] Glencore Annual Report 2012, **R-257**, p. 71, note 2.

mine".[3] Claimant's never-before-reached astronomical projections are at odds with all the historical data available to any willing buyer, and even belied by *ex post* data. Despite Bolivia's demonstration of how unrealistic those projections are, nothing has changed:

- Claimant continues to base its entire valuation of the Mine Lease on the so-called Triennial Plan. Yet Claimant still has not submitted any evidence of the approval of this Plan or any economic or technical analyses of its viability, despite the fact that Bolivia requested – and the Tribunal ordered – Glencore to produce these documents during disclosure;

- Claimant's experts continue to assume "based on experience" that new resources and reserves would be *magically* delineated in the future, despite no exploration or sampling supporting this bold assumption as of the valuation date of the Mine Lease. As explained by Bolivia's mining expert, Dr Neal Rigby of SRK, Claimant's "*inclusion of a very substantial quantity of assumed potential replenishment of future undiscovered and unmeasured resources is thus unacceptable under the CIMVal standards. The tonnage is over 6 Mt and represents some 60% of the material mined in the RPA LoM Plan*".[4] Indeed, CIMVal standards state that "*[i]t is not acceptable to use, in the Income Approach [i.e., a DCF valuation], 'potential resources', 'hypothetical resources' and other such categories that do not conform to the definitions of Mineral Reserves and Mineral Resources*."[5] Claimant further assumes that 100% of the Mine's resources (out of which 70% are *inferred* resources, which have the lowest level of confidence among mineral resources and have no demonstrated economic or geological viability) will be mined in the future, despite this being contrary to Claimant's own contemporaneous documents (which show that Claimant discounted these resources by, at least, 30% due to its high level of uncertainty);

- Based on its artificially expanded resource and reserve base, Claimant assumes that the Mine's annual extraction rate would have *magically* doubled in only 3 years, from an average of 278,119 MT in 2011 to 550,579 MT in 2014, despite the Mine's bottlenecks which make it practically impossible to attain Claimant's projected extraction levels. Claimant's attempt to ignore these bottlenecks – fatal to its case – is so obvious that it does not once mention the San José winze in its Reply on

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3 Statement of Defence, ¶ 629.

4 SRK II, ¶ 39 (emphasis added).

5 CIMVal Standards and Guidelines for Valuation of Mineral Properties, February 2003, **RPA-73**, section G4.9 (emphasis added).

Quantum, despite this being the bottleneck of the Mine that limits the amount of material that can be taken from deeper levels of the Mine – from which additional mineralized material would have been taken – to the surface. And just as, in Claimant's *magical* Mine, astonishing amounts of ore are extracted despite the Mine's bottlenecks, such ore is also *magically* mined, as Claimant's valuation assumes very little investments in equipment and labour (Claimant's valuation assumes that, by 2014, Sinchi Wayra would have had 570 employees, *i.e.*, 45% of the 1,249 employees State-owned Colquiri had by that same year to sustain much lower extraction rates than assumed by Claimant);

- Also based on its artificially expanded resource and reserve base, Claimant assumes that the Concentrator Plant's annual processing rate would *magically* quintuple in a 3-year period, from 1,000 tpd to 5,000 tpd (500%), despite this being impossible due to the aforementioned Mine's bottlenecks (the Mine feeds the Plant) and the latter's capacity constraints;

- Claimant assumes that head grades, metallurgical recovery rates and concentrate grades would have all reached historical maximums at Colquiri only 6 months after the reversion of the Mine Lease, despite this being entirely inconsistent with historical figures and the fact that grades – and, therefore, recovery rates – decrease as mining goes deeper; and

- More than 40 years after the first drilling sample was obtained from the old tailings dam, no owner of Colquiri[6] (including Claimant) has ever taken substantial steps to implement what Claimant calls the old tailings project (the "**Old Tailings Reprocessing Project**"). As Bolivia's mining expert stated since its first report, "*[t]he fact that this project, which was first evaluated in 1978, has still not been implemented some 40 years later, suggests that something is remiss*".[7] Despite this, relying solely on a 2004 study by COMSUR (not even Glencore), Claimant claims an astonishing US$ 99 million (without interest) for this Project.

13. Claimant's "magical" Tin Smelter also defies credulity. [redacted]

[redacted]

[redacted]

6 There is no evidence that Comsur had begun work on the Tailings Plant Project. Glencore only relies on Eskdale's Third Witness Statement to argue the opposite (¶ 24).

7 SRK I, ¶ 38.

[redacted] Claimant seeks no less than US$ 56 million (US$ 162.4 million with interest) for the Tin Smelter.

14. As Bolivia explained in its Statement of Defence, Claimant's valuation of the Tin Smelter also relies on unsupported and unrealistic assumptions aimed at inflating its damages in complete disregard of the Tin Smelter's historical performance. Despite Bolivia's criticisms, nothing has changed:

- The Tin Smelter that Claimant described as a "*ghost plant*"[8] in November 2004 would have magically become a highly performant Smelter as of the valuation date in February 2007, capable of increasing production of tin ingots by 21.8% from some 11,400 tonnes per year in 2005 and 2006 to 14,000 tonnes of tin ingots per year starting in 2008, "*without expanding the existing infrastructure*."[9] Yet, despite claiming that an increase in tin ingot production could be achieved without expanding the Smelter's original (and outdated) units, Claimant's 2005 and 2006 production levels remained within the same 11,400 tonne-levels as prior years, despite having excess concentrates to process at the time. The reason is quite clear: the Smelter's outdated furnaces were already operating at maximum capacity.

- Claimant's impracticable production levels are also premised on (i) an unrealistic never-failing supply of high-grade tin concentrates, despite the fact that average grade of the concentrates processed at the Tin Smelter has been in decline historically as the exploitation in the mines moves deeper underground, and (ii) an unduly high and constant metallurgical recovery rate, notwithstanding the fact that, in the real world, the recovery rate declines as the average grade of the concentrates decreases, as demonstrated by the *ex ante* data.

15. Also incredibly, Claimant seeks US$ 1.9 million for what would be the *only* non-operating smelter that *magically* appreciates in value over time (as Claimant's expect Ms Russo would have this Tribunal believe to justify a 2020 valuation date) despite being in complete ruins and admittedly contaminated (**Section 4**).

16. **A final attempt to inflate an already grossly exaggerated, undue payment**. Claimant's interest claim, based on (i) 8.6% for the Tin Smelter (from 8 February 2007); (ii) 6.13% for the Tin Stock (from 30 April 2010); (iii) 6.4% for the Colquiri Mine Lease (from 29 May 2012); and (iv) 6.7% for the Antimony Smelter (from 22 January 2020) interest rates, amounts

8 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**, p. 2.

9 Reply on Quantum, ¶ 126.

to an astounding 43.5% of the total damages sought in this arbitration. This interest rate, if applied, would compensate Claimant for risks it did not bear and, thus, lead to Claimant's unjust enrichment. Claimant also seeks the application of compound interest, despite it being illegal under Bolivian law for non-commercial matters, such as this arbitration (**Section 5**).

17. **Bolivia's prayer for relief**. For all these reasons, the Tribunal should reject Claimant's claims in their entirety and order Claimant to reimburse all costs incurred by Bolivia in this arbitration (**Section 6**).

* * *

18. **Reservation of rights**. As Bolivia explained in its letters of 23 April and 4 May 2020, the COVID-19 sanitary crisis has prevented the *Procuraduría General del Estado*, counsel for Bolivia and its experts from carrying out activities that are fundamental for the preparation of this Rejoinder on Quantum. Bolivia submitted clear evidence of these limitations to the Tribunal, explaining that, as a result of the sanitary crisis and ensuing restrictions, among others, (i) the Colquiri Mine and the Tin Smelter were closed between 26 March and 11 May 2020 (*i.e.*, 1 month and a half), during which counsel to Bolivia was not able to access the files and records of the Colquiri Mine and the Tin Smelter (fundamental for Bolivia's defence in this arbitration), and then only reopened under reduced working hours and shifts, and [redacted] The work of Bolivia's mining expert, Dr Neal Rigby, was also severely prejudiced by the COVID-19 sanitary crisis. As Dr Rigby expresses in his second expert report, "*[r]emote working from ill-equipped home offices, IT and internet problems, file corruption, power outages and different time zones presented major challenges to the finalization of this report by the deadline prescribed*".[10]

19. In light of these unprecedented obstacles, Bolivia requested a reasonable 8-week extension to file its Rejoinder on Quantum, yet the Tribunal inexplicably granted Bolivia only an 18-day extension. The Tribunal grounded its decision on its duty to "*avoid unnecessary delay […] and to provide a fair and efficient process for resolving the Parties' dispute*",[11] even though granting the extension requested by Bolivia would not have affected the hearing dates (which had already been postponed to 5-9 October 2020, *i.e.*, 4 months from today) nor Claimant's right to prepare for the hearing. In fact, because the hearing dates had already been postponed,

[10] SRK II, ¶ 8.

[11] Procedural Order No. 11 of 5 May 2020, ¶ 17.

granting Bolivia's extension request would not have caused any prejudice to Claimant. Quite the opposite, Claimant would have had 84 days from receiving the Rejoinder on Quantum to prepare for the hearing, *i.e.*, 16 days *more* than what Claimant initially had.[12]

20. Notwithstanding Bolivia's agreement with Claimant for an additional 3-day extension, Bolivia has been prevented from exercising its right to defence (especially to submit full documentary and expert evidence), and must, therefore, reserve all of its rights in this respect.

2. CLAIMANT IS WRONG ON THE LAW AND THE APPLICABLE STANDARDS OF COMPENSATION, ON THE APPROPRIATE VALUATION DATES FOR THE ASSETS, AND ALSO ON THE CERTAINTY REQUIRED FOR PROVING THE EXISTENCE OF DAMAGES

21. In its Reply on Quantum, Claimant has advocated for an overly flexible approach to compensation and quantum, so that it can cherry-pick among the methods of calculating damages and inflate its claims. Claimant's approach to the law and the standard of compensation applicable to this dispute is flawed (**Section 2.1**), and so is its position on the appropriate valuation dates for Colquiri and the Antimony Smelter (**Section 2.2**), as well as its conflated position on the standard for proving the existence of damages (**Section 2.3**).

2.1 Claimant Is Wrong On The Law And The Standard Of Compensation Applicable To This Dispute

22. Claimant alleges that the customary international law standard of 'full reparation' applies to the assessment of compensation for all of its Treaty claims, and that no matter what the Tribunal finds on the merits, the *entire* relief it seeks should be "*the floor for damages*,"[13] as if it should be awarded even more than it asks for.

23. Claimant's 'one-size-fits-all' approach is only aimed at inflating its damages and is indefensible. On the one hand, the Treaty provides the compensation standard applicable to Claimant's expropriation claims. On the other hand, even if the customary international law standard of 'full reparation' applied indistinguishably to all of Claimant's claims (*quod non*), the Tribunal should still arrive at the same valuation results as under the Treaty's compensation standard.

24. *First*, Article 5(1) of the Treaty provides that compensation for an expropriation "*shall amount to the market value of the investment expropriated immediately before the expropriation or before the impending expropriation became public knowledge, whichever is earlier.*"[14]

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12 Annex to Procedural Order No. 7 of 29 July 2020.

13 Reply on Quantum, ¶¶ 14-16, 23.

14 Treaty, **C-1**, Article 5(1).

Claimant's expropriation claims must be assessed per the standard that the Contracting Parties established as applicable to expropriation claims under the Treaty,[15] for at least three reasons.

25. One, despite Claimant's self-serving assertions,[16] the expropriations alleged in this case were not unlawful, and thus, the Treaty's compensation standard applies to them. Even if Claimant's Assets had been expropriated (*quod non*),[17] the fact remains that Claimant effectively complains only of not having received compensation for its Assets.[18] However, an expropriation only lacking the payment of compensation is not automatically unlawful, as Claimant would have it, but is instead deemed "*provisionally lawful*."[19]

26. As Bolivia has explained, it is widely accepted in investment jurisprudence that the non-payment of compensation does not make an expropriation *ipso facto* unlawful.[20] The findings of the tribunals in, *inter alia*, Ampal, *Venezuela Holdings*, *Conocophillips*, *Tidewater*, *Metalclad*, *Tecmed*, *Abengoa*, *Wena*, and *Middle East Cement* confirm this.[21] Claimant did

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15 Statement of Defence, ¶¶ 692, 719-721.

16 Reply on Quantum, ¶¶ 14, 17, 23.

17 Bolivia's position on the merits remains that Claimant's Assets were not expropriated, but reverted, in a legitimate exercise of Bolivia's police powers. See Transcript of the Hearing on the Merits, Day 1 (English), P129:L16-P131:L14 (Respondent's Opening Statement); Rejoinder on the Merits, Section 5.1.1; Statement of Defence, Section 6.1.1; *Quiborax SA and Non Metallic Minerals SA v Plurinational State of Bolivia* (ICSID Case No ARB/06/2) Award of 16 September 2015, **CLA-127**, ¶ 202 ("*International law has generally understood that regulatory activity exercised under the so-called 'police powers' of the State is not compensable*"); *Marfin Investment Group Holdings S.A. and others v. Republic of Cyprus*, ICSID Case No. ARB/13/27, Award of 26 July 2018, **RLA-202**, ¶ 828.

18 Reply on the Merits, Section V.A.2.a. As Bolivia has explained, Claimant's invented requirement that it was entitled to, but did not receive, *prior* due process during the reversions finds no basis in the Treaty and is, in any event, unsustainable. See Transcript of the Hearing on the Merits, Day 1 (English), P131:L23-P132:L23 (Respondent's Opening Statement); Rejoinder on the Merits, Section 5.1.2.2; Statement of Defence, Section 6.1.2.2.

19 Rejoinder on the Merits, ¶¶ 706-711; Statement of Defence, ¶¶ 495-499. See also J. Crawford, *Brownlie's Principles of Public International Law*, 8th ed. 2012, **RLA-63**, p. 624; A. Sheppard, "The distinction between lawful and unlawful expropriation" in *Investment Arbitration and the Energy Charter Treaty*, JurisNet, 2006, **RLA-64**, p. 171.

20 Rejoinder on the Merits, ¶¶ 710-711; Statement of Defence, ¶ 498 and footnotes 662 and 663.

21 *Ampal-American Israel Corporation and others v. Arab Republic of Egypt*, ICSID Case No. ARB/12/11, Decision on Liability and Heads of Loss of 21 February 2017, **RLA-61**, ¶ 186 ("*By these terms, Article III(1) creates an international obligation on the part of the State to pay compensation for the expropriation of an investor's property. This Tribunal is empowered to enforce that obligation, calculating the amount of compensation due according to the standard prescribed in the Treaty, in the event that the State fails to pay such compensation. This does not require the Tribunal to find that the expropriation in question was unlawful, as may be the case in the event that the taking was not done for a public purpose or was discriminatory*") (emphasis added); *Venezuela Holdings, B.V. and Others v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB/07/27, Award of 9 October 2014, **RLA-65**, ¶ 301 ("*the mere fact that an investor has not received compensation does not in itself render an expropriation unlawful*"), ¶¶ 306-307; *ConocoPhillips Petrozuata BV and others v Bolivarian Republic of Venezuela* (ICSID Case No ARB/07/30) Decision on Jurisdiction and the Merits of 3 September 2013, **CLA-117**, ¶ 342; *ConocoPhillips Petrozuata B.V. and others v. Bolivarian Republic of Venezuela*, ICSID Case No ARB/07/30, Award of 8 March 2019, **RLA-203**, ¶¶ 219-220 ("*the investor that suffered an expropriation that was otherwise 'lawful' (except for the non-payment of compensation), is not entitled to claim for more than the payment by the host State of such compensation reflecting the market value of the investment at the moment of the expropriation, plus interest to the day of payment*."); *Metalclad Corporation v United Mexican States* (ICSID Case No ARB(AF)/97/1) Award of 30 August 2000, **CLA-27**,¶ 118; *Técnicas Medioambientales Tecmed SA v United Mexican States* (ICSID Case No ARB(AF)/00/2) Award of 29 May 2003, **CLA-43**, ¶ 187; *Abengoa, S.A. and COFIDES, S.A. v. United Mexican States*, ICSID Case No. ARB(AF)/09/2, Award of 18 April 2013, **RLA-66**, ¶ 681; *Wena Hotels Ltd. v. Arab Republic of Egypt*, ICSID Case No. ARB/98/4, Award of 8 December 2000, **RLA-68**, ¶¶ 101, 118 and 125; *Middle East Cement Shipping and Handling Co SA v Arab Republic of Egypt* (ICSID Case No ARB/99/6) Award of 12 April 2002, **CLA-34**, ¶¶ 143-151.

not address any of these authorities at the Hearing, while in its prior submissions, it only attempted to distinguish the *Santa Elena*, *Tidewater* and *Venezuela Holdings* decisions from this case.[22] Thus, Claimant has still not offered any explanation for the fact that none of these tribunals found an unlawful expropriation, even though no compensation had been paid by the State.[23]

27. The "*provisionally lawful*" character of an expropriation only lacking the payment of compensation determines the standard applicable for the compensation due. As the *Tidewater* tribunal explained:

> *a distinction has to be made between a lawful expropriation and an unlawful expropriation. An expropriation only wanting fair compensation has to be considered as a provisionally lawful expropriation, precisely because the tribunal dealing with the case will determine and award such compensation.*
>
> *The essential difference between the two is that compensation for a lawful expropriation is fair compensation represented by the value of the undertaking at the moment of dispossession and reparation in case of unlawful expropriation is restitution in kind or its monetary equivalent.* [24]

28. In other words, since the alleged expropriations that Claimant complains of in this case are only lacking compensation and are, thus, "*provisionally lawful*", the applicable standard of compensation is provided by Article 5(1) of the Treaty, not by customary international law.

29. Two, even if the alleged expropriations were unlawful (*quod non*), the Tribunal should still apply the standard in Article 5(1) of the Treaty to the valuation of all Assets in dispute.

30. As Bolivia explained, the Contracting Parties chose to include in their Treaty a compensation provision that is general in scope and for which an expropriation's legality is irrelevant.[25] They agreed that compensation for expropriations will be "*just and effective*," as long as it reflects "*the market value of the investment expropriated immediately before the expropriation or before the impending expropriation became public knowledge*", together with interest until the date of payment.[26] Considering that Article 5(1) of the Treaty aims to guarantee that the investor remains undamaged, the standard of compensation therein should also be deemed sufficient to meet the customary international law standard of 'full reparation.'

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22 Reply on the Merits, ¶ 404.

23 Rejoinder on the Merits, ¶ 711.

24 *Tidewater Investment SRL and Tidewater Caribe, C.A. v. The Bolivarian Republic of Venezuela*, ICSID Case No. ARB/10/5, Award of 13 March 2015, **RLA-60**, ¶¶ 141-142 (emphasis added).

25 Statement of Defence, ¶¶ 719, 723. See also *British Caribbean Bank Ltd. v. Belize*, PCA Case No. 2010-18, Award of 19 December 2014, **RLA-105**, ¶ 260.

26 Treaty, **C-1**, Article 5(1).

31. Claimant has offered no response to this argument, nor has it provided any reason why the Tribunal should deviate from the will of the Contracting Parties, in its assessment of compensation for expropriation. Claimant has merely repeated its assertion that the "*plain text of the Treaty*" supposedly only sets out "*the requirements for a State to carry out a lawful expropriation.*"[27] However, Claimant has still not pointed to a single reference to lawful expropriations in the 'plain text' of Article 5(1) that would support its allegedly limited scope – nor can it, as no such reference exists.

32. Three, despite Claimant's assertions, Bolivia does not rely on minority positions that are "*contrary to the arbitral jurisprudence.*"[28] Like the *British Caribbean Bank* tribunal that Bolivia had relied on, the *Servier* tribunal also found that since the treaty's compensation standard does not distinguish between lawful and unlawful expropriations, it must apply to both.[29] The *Servier* tribunal noted that it "*must take the [treaty's expropriation provision] as drafted*" and apply it "*regardless of whether the divestment entails illicit actions covered by the first subparagraph of that section which prohibits certain types of expropriations.*"[30]

33. Pertinently, the same reasoning was also adopted by the *Rurelec* tribunal, which interpreted the very Treaty applicable in this case. Even though the *Rurelec* tribunal deemed that Bolivia had no intention of compensating claimants in that case,[31] it nonetheless concluded that:

> *it should continue to apply the terms of Article 5 of the UK-Bolivia BIT. The BIT makes no distinction between the compensation to be provided in respect of an unlawful expropriation as opposed to a lawful one, and the Tribunal does not find any reason to believe that the illegality of the expropriation renders what the BIT deems to be 'just and effective compensation' suddenly inadequate.*[32]

34. In short, the Contracting Parties agreed that the standard in Article 5(1) of the Treaty provides sufficient, "*just and effective compensation*" for any type of expropriation. This Tribunal

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27 Reply on Quantum, ¶ 19; Reply on the Merits, ¶ 399.

28 Reply on Quantum, ¶¶ 20-21.

29 Reply on Quantum, ¶ 21. See also *British Caribbean Bank Ltd. v. Belize*, PCA Case No. 2010-18, Award of 19 December 2014, **RLA-105**, ¶¶ 260-262.

30 *Les Laboratoires Servier, S.A.S., Biofarma, S.A.S., Arts et Techniques du Progres S.A.S. v. Republic of Poland*, PCA, Final Award of 14 February 2012, **RLA-48**, ¶ 644 ("*the Tribunal interprets the second subparagraph of BIT Article 5(2) as setting the standard of compensation for any divestment, not just what might be called 'permitted' expropriations which did not violate the earlier prohibitions on discrimination, breach of specific undertakings, and reasons of public necessity.*"), ¶¶ 571-575 ("*The standard set forth above relates to 'any' divestment as articulated in the second subparagraph of Article 5(2) of the BIT, and is not specific to the illicit dispossession covered in the first subparagraph of that provision. The Tribunal is well aware that any divestment as such must be followed by compensation pursuant to the second subparagraph of Article 5(2), regardless of whether the divestment entails illicit actions covered by the first subparagraph of that section which prohibits certain types of expropriations.*").

31 *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 438.

32 *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 613 (emphasis added).

should not disregard the Contracting Parties' choice, but, like the *Rurelec* tribunal, it should also "*continue to apply the terms of Article 5 of the UK-Bolivia BIT*,"[33] regardless of whether the alleged expropriations are found 'provisionally lawful' or even unlawful (*quod non*).

35. *Second*, even assuming that the customary international law standard of 'full reparation' applied indistinguishably to all of Claimant's claims (*quod non*), there are still two important points that the Tribunal must consider in its valuation of Claimant's claims.

36. On the one hand, regarding Claimant's FET and FPS claims, it is undisputed that the customary 'full reparation' standard applies to the determination of any compensation allegedly due.[34] The debate here is not whether the full reparation standard applies, but the fact that Claimant has not actually applied said standard to its FET and FPS claims.

37. As explained below,[35] Claimant's valuation models seek to account for the alleged implications of Bolivia's reversion decrees on Claimant's Assets, and calculate an inflated compensation for the Assets' full loss. However, Claimant has never identified which specific damages allegedly arise out of the distinct actions of Bolivia that form the basis for its supplementary FPS claim for Colquiri or its alternative FET claims for all three reverted Assets. Claimant has also not even addressed causation between any of these alleged breaches and the separate heads of damages that they supposedly resulted in, even though Claimant acknowledges its burden to do so.[36]

38. Accordingly, were the Tribunal to reject Claimant's expropriation claims on the merits (as it should), there currently exists no workable causation analysis or valuation to support Claimant's compensation claims for its FET or its FPS claims.

39. On the other hand, regarding Claimant's claims of expropriation, even assuming that they were governed by customary international law and not the Treaty's compensation standard

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33 *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 613.

34 Reply on Quantum, ¶ 22.

35 See Section 3 below, ¶¶ 220-223.

36 Reply on Quantum, ¶ 24 ("*Glencore Bermuda accepts that it bears the burden of proving the damage that it has suffered as a result of Bolivia's wrongful conduct*."). See also *Perenco Ecuador Limited v. The Republic of Ecuador*, ICSID Case No. ARB/08/6, Award of 27 September 2019, **RLA-204**, ¶ 74 ("*The Tribunal recalls that it is well-established that the burden of proving damages lies with the claiming party. In the absence of a creeping or indirect expropriation effected by a series of discrete measures, the orthodox approach is for a claimant to identify the damages caused by each breach at the time of its occurrence*") (emphasis added); *S.D. Myers, Inc. v. Government of Canada*, NAFTA-UNCITRAL, Partial Award of 13 November 2000, **RLA-101**, ¶ 316 ("*the Tribunal accepts, that the following principles also apply: the burden is on SDMI [i.e. the claimant] to prove the quantum of the losses in respect of which it puts forward its claims; compensation is payable only in respect of harm that is proved to have a sufficient causal link with the specific NAFTA provision that has been breached*") (emphasis added).

(*quod non*), the Tribunal would still need to arrive at the same valuation results. This is so for, at least, two reasons.

40. One, regardless of whether a different compensation standard applies to lawful or unlawful expropriations, the result should be the same in terms of valuation, since the principle is that damages must be compensatory, and not punitive, in nature. Under international law, compensation is awarded whenever restitution in kind is unavailable or inadequate, and is meant to be the monetary equivalent to said restitution.[37] As the ILC's Special Rapporteur explained in the commentary to Article 36 of the Articles on State Responsibility:

> *the function of compensation is to address the actual losses incurred as a result of the internationally wrongful act. In other words, the function of article 36 is purely compensatory, as its title indicates. Compensation corresponds to the financially assessable damage suffered by the injured State or its nationals. It is not concerned to punish the responsible State, nor does compensation have an expressive or exemplary character.*[38]

41. In other words, as put by the PCIJ in *Chorzów*, in the context of reparation for illegal acts under international law, when restitution in kind is not possible, compensation is effected through the "*payment of a sum corresponding to the value which a restitution in kind would bear*,"[39] but nothing more. Awarding more than the equivalent to restitution in kind would essentially be "punishing" the State, while also unjustly enriching for the investor, who would receive more than what he actually lost. Both punitive damages and unjust enrichment are prohibited under international law.[40]

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37 International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, Article 34 ("*Full reparation for the injury caused by the internationally wrongful act shall take the form of restitution, compensation and satisfaction, either singly or in combination, in accordance with the provisions of this chapter*."), Article 36(1) ("*The State responsible for an internationally wrongful act is under an obligation to compensate for the damage caused thereby, insofar as such damage is not made good by restitution*.").

38 International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, Article 36 - Commentary ¶ 4 (emphasis added), and citations therein.

39 *Case Concerning the Factory at Chorzów* (*Germany/Poland)* (Merits) [1928] PCIJ Series A, No 17, **CLA-2**, p. 47.

40 Concerning the prohibition of punitive damages in international law, see, indicatively, International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, Chapter III - Commentary ¶ 5 ("*The award of punitive damages is not recognized in international law even in relation to serious breaches of obligations arising under peremptory norms*."), footnote 516 ("*In the Velásquez Rodriguez, Compensatory Damages case, the Inter-American Court of Human Rights held that international law did not recognize the concept of punitive or exemplary damages (Series C, No. 7 (1989))*"); *Swisslion DOO Skopje v Former Yugoslav Republic of Macedonia* (ICSID Case No ARB/09/16) Award of 6 July 2012, **CLA-203**, ¶ 344 ("*it is not the Tribunal's role to award punitive damages*."); *SD Myers Inc v Government of Canada* (UNCITRAL) Second Partial Award of 21 October 2002, **CLA-39**, ¶ 6; *Waguih Elie George Siag and Clorinda Vecchi v Arab Republic of Egypt* (ICSID Case No ARB/05/15) Award of 1 June 2009, **CLA-89**, ¶¶ 544-545. Concerning the prohibition of unjust enrichment in international law, see, indicatively, *Venezuela Holdings, B.V. and Others v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB/07/27, Award of 9 October 2014, **RLA-65**, ¶ 378 and citations therein; *Saluka Investments BV v Czech Republic* (UNCITRAL) Partial Award of 17 March 2006, **CLA-62**, ¶ 449 ("*The concept of unjust enrichment is recognised as a general principle of international law*.") and citations therein; *Amoco International Finance Corporation v Government of the Islamic Republic of Iran and others*, Partial Award (1987-

42. Accordingly, even if the Tribunal applied the compensatory standard of 'full reparation' to Claimant's alleged expropriation claims, it would still have to award "*a sum corresponding to the value which a restitution in kind would bear*,"[41] if restitution had occurred at the time of the expropriation, along with interest until the date of payment. In other words, the result would be the same as the one under Article 5(1) of the Treaty.[42]

43. Two, as Bolivia has explained, arbitral jurisprudence has consistently confirmed that, in cases of expropriation, the standards of compensation under a treaty or customary international law effectively yield the same valuation results, *i.e.*, the awarding of a sum corresponding to the investment's fair market value at the time of dispossession.[43] As put by the *Tenaris II* tribunal:

> *It is an indisputable principle of customary international law that the victim of an unlawful act perpetrated by a State has the right to receive full reparation, as if the wrongful act had not occurred. In cases of expropriation, the full reparation is equivalent to the market value of the expropriated property, understood as the value that the owner could have obtained, if he had disposed of it on a date immediately prior to that on which the State dispossessed him, or on the date that the will to expropriate became publicly known (reducing the market value of the property).*
>
> *Therefore, in practical terms, the regulation of the compensation contained in the BITs leads to the same results as if the general principles of international law were applied.*[44]

44. Claimant accuses Bolivia of mischaracterizing the authorities that it previously relied on for its position,[45] but Claimant simply misses the point. Bolivia's previously cited authorities awarded an investment's fair market value at the time of dispossession even in cases of illegal expropriation, because they acknowledged, implicitly or even explicitly, that the practical

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Volume 15) Iran-US Claims Tribunal Report, **CLA-10**, ¶ 225 ("*[the Tribunal's] first duty is to avoid any unjust enrichment or deprivation of either Party*").

41 *Case Concerning the Factory at Chorzów* (*Germany/Poland)* (Merits) [1928] PCIJ Series A, No 17, **CLA-2**, p. 47.

42 Treaty, **C-1**, Article 5(1) ("*just and effective compensation […] shall amount to the market value of the investment expropriated immediately before the expropriation or before the impending expropriation became public knowledge, whichever is the earlier, shall include interest […] until the date of payment, shall be made without delay, be effectively realizable and be freely transferable*").

43 Statement of Defence, ¶ 720 and footnote 985.

44 *Tenaris SA and Talta-Trading E Marketing Sociedade Unipessoal LDA v Bolivarian Republic of Venezuela* (ICSID Case No ARB/11/26) Award of 29 January 2016, **CLA-220**, ¶¶ 396-397 (Unofficial English translation; Spanish original: "*Es un principio indiscutido del Derecho internacional consuetudinario que la víctima de un acto ilícito perpetrado por un Estado tiene derecho a recibir una reparación íntegra, como si el acto ilícito no hubiera ocurrido. En casos de expropiación, la reparación íntegra equivale al valor de mercado del bien expropiado, entendido como el valor que el titular podría haber obtenido, si lo hubiera enajenado en una fecha inmediatamente anterior a aquella en la que el Estado le desposeyó, o en la que la voluntad de expropiación trascendió al público (reduciendo el valor de mercado del bien). Por tanto, en términos prácticos, la regulación de la compensación contenida en los AAPRI lleva a los mismos resultados que si se aplicaran los principios generales del Derecho internacional*") (emphasis added).

45 Reply on Quantum, ¶ 21.

result is the same, regardless of whether a treaty's compensation standard or that of customary law applied in the valuation of expropriations.[46]

45. For instance, the *CME* tribunal considered that, whether by virtue of the treaty's 'just compensation' standard or by virtue of the customary principle of 'full reparation,' claimant would have to be compensated "*by payment of a sum corresponding to the value which a restitution in kind would bear. This is the fair market value of Claimant's investment as it was before consummation of the Respondent's breach of the Treaty*", *i.e.*, at the time of dispossession.[47] Similarly, and per Claimant's own description, the *Flughafen* tribunal found that "*in practice, the customary international law principle of full reparation and the two applicable treaties all required the payment of compensation equivalent to the fair market value of the relevant investments*," importantly, at the time of dispossession.[48]

46. The same conclusion is also supported by *Funnekotter*, Claimant's own authority on the appropriate valuation in cases of expropriation, which concluded that:

> *the damages suffered by the Claimants must be evaluated at the date of dispossession. This is the rule both under general international law and under Article 6(c) of the BIT [….]. The identity of calculation under the BIT and general international law reinforces the Tribunal's conclusion that arguments respecting*

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46 *Técnicas Medioambientales Tecmed SA v United Mexican States* (ICSID Case No ARB(AF)/00/2) Award of 29 May 2003, **CLA-43**, ¶¶ 191, 192, 195 (the *Tecmed* tribunal "*in the task of establishing the market value [of the illegally expropriated investment] as of such date —the moment when the expropriatory act occurred*," applied the treaty's compensation standard and arrived to an amount "*which also reflects the principle that compensation of such loss must amount to an integral compensation for the damage suffered*," per the *Chorzów* decision, which it cited in support of its conclusion); *Abengoa, S.A. and COFIDES, S.A. v. United Mexican States*, ICSID Case No. ARB(AF)/09/2, Award of 18 April 2013, **RLA-66**, ¶¶ 677, 681 (after noting the parties' agreement that the compensation awarded should satisfy the customary standard of 'full reparation' as laid down in *Chorzów*, the *Abengoa* tribunal went on to apply the treaty's compensation standard in quantifying the damages awarded for the illegal expropriation that it had found, implicitly confirming that this would also meet the parties agreed upon compensation standard); *Wena Hotels Ltd. v. Arab Republic of Egypt*, ICSID Case No. ARB/98/4, Award of 8 December 2000, **RLA-68**, ¶¶ 101, 118, 125 (the *Wena* tribunal found a breach of the treaty's expropriation provision, but nonetheless decided that it "*shall apply this standard to the determination of damages.*" The parties' agreement, that Claimant attempts to rely on, was solely over the fact that the assets' fair market value was best reflected by the investor's "*actual investments in the two hotels.*").

47 *CME Czech Republic BV v Czech Republic* (UNCITRAL) Partial Award of 13 September 2001, **CLA-32**, ¶ 618. See also *CME Czech Republic BV v Czech Republic* (UNCITRAL) Partial Award of 13 September 2001, **CLA-32**, ¶ 615; *CME Czech Republic BV v Czech Republic* (UNCITRAL) Final Award of 14 March 2003, **CLA-42**, ¶¶ 496, 498, 501-502.

48 Reply on Quantum, footnote 18. See also *Flughafen Zürich A.G. and Gestión e Ingenería IDC S.A. v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB/10/19, Award of 18 November 2014, **RLA-107**, ¶¶ 744-747 ("*En términos prácticos, la regulación de la compensación contenida en ambos Tratados lleva a los mismos resultados. Resultados a los que también se llegaría, si se aplicaran los principios generales del Derecho internacional […] consuetudinario […]. Y en una expropiación la reparación íntegra equivale al valor de mercado del bien expropiado, valor que el titular podría haber obtenido, si lo hubiera enajenado justo antes de la fecha en que el Estado realizó la desposesión, o en la que la voluntad de expropiación trascendió al público (reduciendo el valor de mercado del bien)*") (Unofficial English translation: "*In practical terms, the standard of compensation contained in both Treaties yields the same results. Results to which one also arrives by applying the general principles of customary international law. […] And in cases of expropriation, full reparation is equivalent to the market value of the expropriated asset, which the owner could have obtained, had he sold the asset immediately before the date on which the State carried out the dispossession, or on which the will to expropriate became publicly known (reducing the asset's market value).*") (emphasis added).

> *the treatment of a violation of Article 6(c) as a lawful or unlawful expropriation need not be reached.*[49]

47. In short, as the weight of arbitral authority indeed confirms, the practical results of applying the Treaty's compensation standards or the customary international law standard of full reparation to the valuation of the expropriations alleged in the present case should be the same: the awarding of the Assets' fair market value at the date of dispossession. This means that the additional flexibility that Claimant seeks in the quantification of damages supposedly by virtue of the customary standard of 'full reparation' is simply unwarranted.

48. In conclusion, Bolivia's position remains that, in assessing compensation for the alleged expropriation of Claimant's Assets, the Tribunal should apply the standard that the Contracting Parties expressly provided in Article 5(1) of the Treaty. Even if the customary 'full reparation' standard were deemed applicable to all of Claimant's claims (*quod non*), Claimant itself is yet to apply said standard to its FET and FPS claims or offer a causation analysis for these claims, while, for Claimant's expropriation claims, the valuation result should be the same, as if the Tribunal had applied the Treaty's standard.

2.2 Claimant Is Wrong On The Appropriate Valuation Dates For The Assets

49. The Parties agree that the appropriate valuation dates for Tin Smelter and the Tin Stock are the dates of dispossession, *i.e.*, of the alleged respective Treaty breaches. Accordingly, the Tin Smelter must be valued as of 8 February 2007,[50] and the Tin Stock as of 30 April 2010.[51]

50. What the Parties disagree on are the appropriate valuation dates for Colquiri and the Antimony Smelter. In an attempt to maximize its entitlement to compensation for these two Assets, Claimant posits that it should be free to choose the valuation dates yielding the highest returns (for the Antimony Smelter, a valuation *ex post*), or the most convenient results (for Colquiri, a valuation *ex ante*, but at a convenient date to ignore the effects of the Rosario Agreement).

51. Claimant's position is legally and factually unsustainable, both in relation to the appropriate valuation date for Colquiri (**Section 2.2.1**), and for the Antimony Smelter (**Section 2.2.2**).

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[49] *Bernardus Henricus Funnekotter and others v Republic of Zimbabwe* (ICSID Case No ARB/05/6) Award of 22 April 2009, **CLA-88**, ¶ 115 (emphasis added).

[50] Reply on Quantum, ¶ 122 ("*The Parties agree that […]the correct valuation date is 8 February 2007—the day before Bolivia issued the Tin Smelter [Reversion] Decree and [reverted] the Tin Smelter*."); Statement of Defence, ¶ 736.

[51] Reply on Quantum, ¶ 173 ("*In its First Expert Report, Compass Lexecon calculated the FMV of the Tin Stock […] as of 30 April 2010 (the day before Bolivia [reverted] the Tin Stock). Bolivia's expert, Quadrant, does not dispute the valuation date*"); Compass Lexecon I, ¶¶ 98-99; Econ One, ¶¶ 138-139.

2.2.1 The Correct Valuation Date For Colquiri Is 19 June 2012 (*i.e.*, The Date Immediately Before The Issuance Of The 20 June 2012 Colquiri Reversion Decree)

52. Throughout these proceedings, Claimant has continued to come up with new and creative (yet wrong) ideas to pinpoint the valuation date for Colquiri at any possible date before 7 June 2012. As Bolivia underlined,[52] Claimant's attempt is not innocent, but is aimed at avoiding the negative impact on valuation of the Rosario Agreement – an agreement that Glencore itself freely concluded with the *cooperativistas* on 7 June 2012 to transfer to them the Rosario vein.

53. Claimant does not deny this, but instead attempts to draw the focus away from its own improper motives, by accusing Bolivia of seeking to exclude the value of the Rosario vein through its proposed valuation date.[53] Claimant's attempt to shift the blame is unavailing, as Bolivia has only set Colquiri's valuation date to 19 June 2012 because this is what the applicable Treaty standard requires, in light of the facts surrounding Colquiri's reversion.[54] It is Claimant who freely chose to enter into the Rosario Agreement, which, as Bolivia has explained, had the disastrous consequence of escalating the Colquiri social conflict to a point of 'no return', making the Mine's reversion the only way to resolve the conflict and prevent further violence.[55]

54. In contrast, both the original valuation date of 29 May 2012 (**Section 2.2.1.1**), and also the entirely new alternative valuation date of 4 June 2012 (**Section 2.2.1.1**), which Claimant has proposed for Colquiri's valuation,[56] find no basis in either the Treaty or in arbitral practice, and they are also factually unsubstantiated.

2.2.1.1 Claimant's original valuation date of 29 May 2012 is wrong

55. Claimant had originally proposed 29 May 2012 as the appropriate valuation date for Colquiri.[57] Under Claimant's theory, the customary standard of full reparation supposedly allows it to merge together its allegations of expropriation, FPS and FET breaches and request

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52 Statement of Defence, ¶ 703.

53 Reply on Quantum, ¶ 58.

54 Treaty, **C-1**, Article 5(1) ("*Such compensation shall amount to the market value of the investment expropriated immediately before the expropriation or before the impending expropriation became public knowledge, whichever is the earlier*") (emphasis added).

55 Transcript of the Hearing on the Merits, Day 1 (English), P113:L5-P114:L15 (Bolivia's Opening Statement); Rejoinder on the Merits, ¶¶ 312-321, 328-330; Statement of Defence, ¶¶ 9, 213-218.

56 Reply on Quantum, ¶ 57.

57 Reply on Quantum, ¶ 57; Statement of Claim, ¶ 255(ii).

Colquiri's valuation at the date immediately before 30 May 2012, when the *cooperativistas* disrupted Claimant's operations at the Mine.[58]

56. Claimant's 'one-size-fits-all' approach to valuation dates is indefensible, and is only seeking to improperly anchor Colquiri's valuation date as far back as possible, so as avoid the Rosario Agreement's impact. This is so, for at least three reasons.

57. One, Claimant's 'one-size-fits-all' approach is at odds with contemporary arbitral practice. In case like the present, where no allegations of creeping expropriation have been made,[59] investment tribunals have adopted a 'layered' approach, which separately values each treaty breach at the time of its occurrence. As recently summarized by the *Perenco* tribunal:

> *[i]n the absence of a creeping or indirect expropriation effected by a series of discrete measures, the orthodox approach is for a claimant to identify the damages caused by each breach at the time of its occurrence. […] the focus of the inquiry must be on damages proximately caused by the breaches found by the Tribunal.*[60]

58. The *Perenco* tribunal criticized the investor for arguing in the quantum phase that the State's conduct was supposedly inter-linked, in an attempt to make up for its failure to establish a creeping expropriation on the merits. The *Perenco* tribunal observed that "*[t]he breaches are of course inter-linked in that each is a part of the dispute as it evolved, but each has to be examined at its own time and in its own context*."[61] This holds all the more true in the present case, where Claimant has never even argued a creeping expropriation of Colquiri at the merits, but is now effectively seeking similar valuation results, by improperly merging together its expropriation, FPS and FET claims.

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58 Reply on Quantum, ¶¶ 57-59.

59 Statement of Claim, ¶ 148; Reply on the Merits, ¶ 338 ("*through an outright taking, Bolivia deprived Glencore Bermuda of its title, ownership and control over the Assets. These actions also had the effect of entirely wiping out the value of Glencore Bermuda's shareholding in Vinto and Colquiri. […] Bolivia's measures therefore amounted to unlawful direct and indirect expropriations*") (emphasis added), ¶¶ 343(c), 344.

60 *Perenco Ecuador Limited v. The Republic of Ecuador*, ICSID Case No. ARB/08/6, Award of 27 September 2019, **RLA-204**, ¶ 74 (emphasis added) and footnote 24, citing *CME Czech Republic BV v Czech Republic* (UNCITRAL) Partial Award of 13 September 2001, **CLA-32**, ¶¶ 583-585; *SD Myers Inc v Government of Canada* (UNCITRAL) Second Partial Award of 21 October 2002, **CLA-39**, ¶ 140; *BG Group Plc. v. The Republic of Argentina*, UNCITRAL, Final Award of 24 December 2007, **RLA-100**, ¶ 428; *Azurix Corp v Argentine Republic* (ICSID Case No ARB/01/12) Award of 14 July 2006, **CLA-63**, ¶¶ 417-418, 424-433; *Enron Corporation and Ponderosa Assets LP v Argentine Republic* (ICSID Case No ARB/01/3) Award of 22 May 2007, **CLA-68**, ¶¶ 389, 405, 420-423, 436. See also *Murphy Exploration and Production Company International v. Republic of Ecuador [II]*, PCA Case No. 2012-16, Partial Final Award, **RLA-99**, ¶ 482 ("*Investor-state arbitral tribunals have frequently sought to establish the fair market value at the time of the investor's loss of its primary investment as a basis for the calculation of damages. It is also the prevailing approach in financial accounting to consider the ex-ante appraisal of an asset as of a certain valuation date without taking into account subsequent developments*") (emphasis added).

61 *Perenco Ecuador Limited v. The Republic of Ecuador*, ICSID Case No. ARB/08/6, Award of 27 September 2019, **RLA-204**, ¶ 76 (emphasis added).

59. Two, applying the orthodox 'layered' approach and examining separately Claimant's allegations of expropriation reveals that Claimant's valuation of Colquiri as of 29 May 2012 is legally flawed and factually unsubstantiated.

60. On the one hand, as explained above, Claimant has essentially advanced a claim for the 'provisionally lawful' expropriation of Colquiri, complaining only because of not having received compensation.[62] This means that the Treaty's compensation standard in Article 5(1) must apply, which requires a valuation "*immediately before the expropriation or before the impending expropriation became public knowledge, whichever is earlier*."[63]

61. Accordingly, since Colquiri's reversion was neither enacted on 30 May 2012, nor had it even been decided and publicly known at that point, Claimant's valuation date of 29 May 2012 fails to meet the requirements of Article 5(1) of the Treaty. Instead, pursuant to the Treaty's compensation standard, Colquiri must be valued as of 19 June 2012, *i.e.*, "*immediately before*" its alleged expropriation through the 20 June 2012 Reversion Decree.[64]

62. On the other hand, even if the Treaty's compensation standard did not apply to Colquiri's alleged expropriation (*quod non*), Claimant cannot simply invoke the full reparation standard and choose whichever valuation date is more convenient for its damages analysis.

63. Claimant posits that Glencore Bermuda lost and "*never regained operations (including production) at the Colquiri Mine*," following the invasion of the *cooperativistas* on 30 May 2012.[65] As Claimant argues in a footnote, this means that Colquiri should be valued as of 29 May 2012, because four prior tribunals that awarded full reparation had not limited "*their inquiry to the date on which a claimant lost the legal rights to its investment*," but instead "*looked to the specific facts of each case (including the date on which the claimant lost access to or control over its investment as a matter of fact)*."[66]

64. However, these four tribunals – in *Azurix*, *SAUR*, *Kardassopoulos* and *Santa Elena* – are either not comparable to the present case, or they do not actually support Claimant's position.

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62 See above, Section 2.1, ¶¶ 25-28.

63 Treaty, **C-1**, Article 5(1).

64 Treaty, **C-1**, Article 5(1).

65 Reply on Quantum, ¶ 59.

66 Reply on Quantum, footnote 108, citing to *Azurix Corp v Argentine Republic* (ICSID Case No ARB/01/12) Award of 14 July 2006, **CLA-63**; *Compañía del Desarrollo de Santa Elena SA v Republic of Costa Rica* (ICSID Case No ARB/96/1) Final Award of 17 February 2000, **CLA-25**; *Ioannis Kardassopoulos and Ron Fuchs v Republic of Georgia* (ICSID Case Nos ARB/05/18 and ARB/07/15) Award of 3 March 2010, **CLA-96**; *SAUR International v Argentine Republic* (ICSID Case No ARB/04/4) Award, **CLA-255**.

- The *Azurix* tribunal dealt with a creeping expropriation, which had been carried out by a series of governmental measures,[67] and is thus not comparable to the present case, where Claimant has made no allegation of a creeping expropriation.[68] Besides, the *Azurix* tribunal does not stand for Claimant's position that the valuation date should pre-date Colquiri's taking, since that tribunal actually *post-dated* the creeping expropriation's valuation date by a whole year after the first act that it had considered a treaty breach, finding that only then had Argentina's "*breaches of the BIT […] reached a watershed*."[69]

- The *SAUR* tribunal did not interpret customary law and award full reparation by moving "*the date of valuation back […] to a time pre-dating the expropriation, to a date at which the criterion of 'normal economic situation' is met*," as Claimant would have it.[70] That tribunal employed a "*criterion of 'normal economic situation'*" because it had to, "*[i]n applying the BIT*" that specifically contained it.[71] Thus, the *SAUR* tribunal's findings are not only irrelevant to Claimant's position on what the customary standard of full reparation allegedly requires, but they are also non-transposable to this case, where the Treaty contains no such "*criterion of 'normal economic situation'*," as that in Article 5 of the Argentina-France BIT.[72]

- The *Kardassopoulos* tribunal found an expropriation based on a decree dated 20 February 1996, but still set the valuation date on 10 November 1995, supposedly per Claimant, so as "*to ensure full reparation.*"[73] However, that tribunal had previously found that the expropriation before it "*was planned in advance of 20 February 1996*" and that "*the groundwork for the expropriation […] was laid*

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67 *Azurix Corp v Argentine Republic* (ICSID Case No ARB/01/12) Award of 14 July 2006, **CLA-63**, ¶¶ 417, 313.

68 Statement of Claim, ¶ 148; Reply on the Merits, ¶¶ 338, 343(c), 344.

69 *Azurix Corp v Argentine Republic* (ICSID Case No ARB/01/12) Award of 14 July 2006, **CLA-63**, ¶ 418.

70 Reply on Quantum, footnote 97, quoting *SAUR International v Argentine Republic* (ICSID Case No ARB/04/4) Award, **CLA-255**, ¶¶ 168-169.

71 *SAUR International v Argentine Republic* (ICSID Case No ARB/04/4) Award, **CLA-255**, ¶¶ 166-167 ("*El APPRI establece en su art. 5 que las medidas expropiatorias sean compensadas y su monto sea 'calculado sobre el valor real de las inversiones afectadas' y 'evaluado con relación a una situación económico [sic] normal y anterior a cualquier amenaza de desposesión'. En aplicación del APPRI, el Tribunal debe valorar OSM 'en relación a una situación económico normal'*") (Unofficial English translation: "*The BIT establishes in its art. 5 that expropriatory measures must be compensated and that the amount of compensation must be 'calculated based on the real value of the affected investments' and 'evaluated in relation to a normal economic situation [sic] and prior to any threat of dispossession'. In applying the BIT, the Tribunal must assess FMV 'in relation to a normal economic situation'*") (emphasis added).

72 *SAUR International v Argentine Republic* (ICSID Case No ARB/04/4) Award, **CLA-255**, ¶ 166.

73 Statement of Claim, ¶ 253; Reply on Quantum, footnotes 97, 108, quoting *Ioannis Kardassopoulos and Ron Fuchs v Republic of Georgia* (ICSID Case Nos ARB/05/18 and ARB/07/15) Award of 3 March 2010, **CLA-96**, ¶ 517.

through the adoption of Decree No. 477," dated 11 November 1995.[74] Thus, the *Kardassopoulos* tribunal only chose the date *immediately before* the Georgian State issued the decree that commenced the pre-decided expropriation of that investor's investment. Accordingly, Claimant's reliance on that tribunal's findings in support of its 29 May 2012 valuation date is misplaced, since Bolivia had no intention of allegedly expropriating Colquiri at that point, nor did it issue any measures which were meant to lay the groundwork for Colquiri's taking on 20 June 2012.

- The *Santa Elena* tribunal acknowledged the possibility of pre-dating valuations, but only in cases where a State's measures amounted to "*governmental 'interference' [that] has deprived the owner of his rights or has made those rights practically useless*" in a manner that "*is not merely ephemeral*."[75] The *Santa Elena* tribunal then found that "*the practical and economic use of the Property by the Claimant was irretrievably lost*" no earlier than when "*the first step [was taken] in a process of transferring the Property to the Government*."[76] Thus, the *Santa Elena* tribunal supports Bolivia's position instead of Claimant's, since no governmental interference had affected Claimant's property rights over Colquiri as of 30 May 2012. Instead, the practical and economic use of Colquiri by Claimant was only "*irretrievably lost*" to the State when Colquiri reverted to Bolivia, following the Reversion Decree of 20 June 2012.

65. In short, Claimant's attempt to employ a 'criterion of loss of production and operational control' to lock in Colquiri's valuation to the date before the Mine's invasion by the *cooperativistas* is unavailing. It simply does not matter for establishing an expropriation's valuation date whether, following any operational interruptions caused by entities unaffiliated to the Bolivian State, Claimant managed to "*regain operations (including production)*."[77]

66. What Claimant's own authorities instead require is that valuation must occur at the "*watershed moment*" when the measures taken by Bolivia itself caused the "*irretrievable loss*" of

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74 *Ioannis Kardassopoulos and Ron Fuchs v Republic of Georgia* (ICSID Case Nos ARB/05/18 and ARB/07/15) Award of 3 March 2010, **CLA-96**, ¶ 388.

75 *Compañía del Desarrollo de Santa Elena SA v Republic of Costa Rica* (ICSID Case No ARB/96/1) Final Award of 17 February 2000, **CLA-25**, ¶¶ 77-78 (Quoting the Iran-US Claims tribunal in *Tippetts*, the Santa Elena tribunal underlined that "*While assumption of control over property by a government does not automatically and immediately justify a conclusion that the property has been taken by the government, thus requiring compensation under international law, such a conclusion is warranted whenever events demonstrate that the owner was deprived of fundamental rights of ownership and it appears that this deprivation is not merely ephemeral*.") (emphasis in the original).

76 *Compañía del Desarrollo de Santa Elena SA v Republic of Costa Rica* (ICSID Case No ARB/96/1) Final Award of 17 February 2000, **CLA-25**, ¶¶ 80-81 (emphasis added).

77 Reply on Quantum, ¶ 59.

Claimant's legal rights over Colquiri, and in favor of the State.[78] By following Claimant's suggestion and "*look[ing] to the specific facts of [this] case*,"[79] including Claimant's own contemporaneous statements, it becomes apparent that this did not happen at any point before 20 June 2012.

67. It is undisputed that Bolivia took control of the Mine only after the 20 June 2012 Reversion Decree.[80] It is also undisputed that, until that point, Claimant maintained in full all its legal rights under the Colquiri Lease, as evidenced by (i) Claimant's negotiation and conclusion of the Rosario Agreement with the *cooperativistas* on 7 June 2012[81]; and (ii) Claimant's contemporaneous actions; and (iii) Claimant's statements to the market:

- The fact that Claimant negotiated and concluded the Rosario Agreement with the *cooperativistas* on 7 June 2012 conclusively demonstrates that Claimant had not "*irretrievably lost*" its legal rights over the Mine on 30 May 2012, as it now contends, but instead that Claimant retained and freely used said rights as it saw fit – albeit with disastrous effect. In an attempt to downplay the significance of this fact for establishing Colquiri's valuation date, Claimant posits that, when negotiating and concluding the Rosario Agreement, it was only behaving "*as though it still had legal rights under the Colquiri Lease*."[82] Given the significance of the Rosario Agreement and the violent events that it sparked, it is absurd (at best) for Claimant to now suggest that it was just 'pretending' to have the right to sign such an agreement. Claimant could simply not have been negotiating over something already lost. Neither would the *cooperativistas* have accepted to negotiate with Claimant, nor would the Rosario Agreement have resulted in a "*workable solution*" and a "*truce*" that lifted the blockade,[83] if Claimant had indeed "*irretrievably lost*" the Mine a week earlier, to the very party that it negotiated and concluded the Rosario Agreement with.

- As Bolivia has explained and Claimant has left unaddressed, Claimant's contemporaneous actions prove that it did not lose control of the Mine on 30 May

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78 *Azurix Corp v Argentine Republic* (ICSID Case No ARB/01/12) Award of 14 July 2006, **CLA-63**, ¶ 418; *Compañía del Desarrollo de Santa Elena SA v Republic of Costa Rica* (ICSID Case No ARB/96/1) Final Award of 17 February 2000, **CLA-25**, ¶ 81.

79 Reply on Quantum, footnote 109.

80 Supreme Decree No 1.264 of 20 June 2012, **C-39**; Statement of Defence, ¶¶ 709, 713

81 Statement of Claim, ¶ 184(j); Statement of Defence, ¶ 705; Reply on the Merits, ¶ 136.

82 Reply on Quantum, ¶ 59.

83 Statement of Claim, ¶ 220; Reply on the Merits, ¶ 136; Transcript of the Hearing on the Merits, Day 1 (English), P47:L1-8 (Claimant's Opening Statement).

2012.[84] As Mr Eskdale stated in his First Witness Statement, referring to the status of the Rosario negotiations as of 8 June 2012, Glencore was "*relieved that the conflict was over. We had done our best to engage with the various stakeholders in order to reach a compromise that would have allowed us to resume production, protect the safety of our workers, and still be able to market the minerals extracted from the mine. For the first time in days we breathed and slept […]*."[85] This testimony confirms that any operational disturbances at the Mine caused by the *cooperativistas* on 30 May 2012 were "*merely ephemeral*,"[86] and that, as of 8 June 2012, Glencore had neither finally nor irrevocably lost its control – let alone its legal rights – over the Mine, to the benefit of Bolivia.

- [redacted][87][redacted][88][redacted][89][redacted][90][redacted]

84 Statement of Defence, ¶ 706.

85 Eskdale I, ¶ 94 (emphasis added).

86 *Compañía del Desarrollo de Santa Elena SA v Republic of Costa Rica* (ICSID Case No ARB/96/1) Final Award of 17 February 2000, **CLA-25**, ¶ 77, quoting *Tippetts, Abbett, McCarthy, Stratton v. TAMS-AFFA*, Award No. 141-7-2, dated 22 June 1984, p. 226.

87 [redacted]

88 [redacted]

89 [redacted]

90 [redacted]

68. Thus, based on its own actions at the time, Claimant retained in full its legal rights over Colquiri after 30 May 2012 and until 20 June 2012, when Claimant's rights over the Mine were "*irretrievably lost*" and reverted to Bolivia

69. Three, applying the orthodox 'layered' approach and examining separately Claimant's FPS and FET allegations reveals that Claimant is only using its FPS and FET claims in quantum in an attempt to anchor Colquiri's valuation date as far back as possible, so as to avoid the impact of the Rosario Agreement in Colquiri's FMV.

70. In reality, Claimant has only advanced a single valuation and causation analysis based on an expropriation scenario, which assumes the entire loss of Colquiri's value. Claimant has never specified which part of its claimed damages was caused specifically by Bolivia's alleged FPS or FET breaches – Claimant had not even examined each alleged breach "*at its own time and in its own context*," even though it bears the burden of so doing.[91]

71. Besides, Claimant has also not shown how its FPS and FET claims could affect the valuation date for Colquiri's taking.

72. Claimant's FPS allegations could not have affected the date at which "*governmental interference*" resulted in the "*irretrievable loss*" of Claimant's property rights, to quote the *Santa Elena* tribunal, Claimant's authority on valuations at dates that ensure full reparation.[92] As Bolivia has explained, the Mine's occupation by the *cooperativistas* on 30 May 2012 cannot be attributable to Bolivia, since it is undisputed that the *cooperativistas* are in no way affiliated with the Bolivian State, nor controlled by the State.[93] It is also undisputed that Bolivia never had control of the Mine prior to 20 June 2012.[94] Thus, it is only after Colquiri reverted to the State, per the 20 June 2012 Reversion Decree, that Claimant's "*practical and economic use*" of Colquiri could have been "*irretrievably lost*" because of "*governmental interference*" attributable to Bolivia.[95]

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91 *Perenco Ecuador Limited v. The Republic of Ecuador*, ICSID Case No. ARB/08/6, Award of 27 September 2019, **RLA-204**, ¶ 74 ("*The Tribunal recalls that it is well-established that the burden of proving damages lies with the claiming party. In the absence of a creeping or indirect expropriation effected by a series of discrete measures, the orthodox approach is for a claimant to identify the damages caused by each breach at the time of its occurrence.*"), ¶ 76 ("*[t]he breaches are of course inter-linked in that each is a part of the dispute as it evolved, but each has to be examined at its own time and in its own context*.") (emphasis added); Reply on Quantum, ¶ 24 ("*Glencore Bermuda accepts that it bears the burden of proving the damage that it has suffered as a result of Bolivia's wrongful conduct*.").

92 *Compañía del Desarrollo de Santa Elena SA v Republic of Costa Rica* (ICSID Case No ARB/96/1) Final Award of 17 February 2000, **CLA-25**, ¶¶ 77-78, 81; Statement of Claim, ¶ 253; Reply on Quantum, footnote 97.

93 Statement of Defence, ¶ 708.

94 Statement of Defence, ¶ 709.

95 *Compañía del Desarrollo de Santa Elena SA v Republic of Costa Rica* (ICSID Case No ARB/96/1) Final Award of 17 February 2000, **CLA-25**, ¶¶ 77-78, 81.

73. As for Claimant's FET claim, the alleged facts that Claimant takes issue with are unrelated to Claimant's valuation date of 29 May 2012 in terms of timing. Claimant's FET allegations target acts that Bolivia supposedly took either at the beginning of May 2012, or after Colquiri's reversion.[96] Thus, even if they were well-founded (*quod non*), Claimant's FET allegations simply have no temporal connection with Claimant's 29 May 2012 valuation date.

74. In conclusion, there is no basis in either law or fact for Colquiri's valuation date to be set at 29 May 2012. The practical and economic use of Colquiri by Claimant was only "*irretrievably lost*" to the State when Colquiri reverted to Bolivia, following the Reversion Decree of 20 June 2012.[97] Accordingly, Colquiri must be valued as of 19 June 2012, *i.e.*, "*immediately before*" its alleged expropriation through the 20 June 2012 Reversion Decree.[98] Besides, were the Tribunal to reject Claimant's expropriation claims (as it should), there currently exists no causation analysis, nor a workable valuation model to support Claimant's FET or FPS claims to begin with – let alone one justifying a 29 May 2012 valuation date for Colquiri.

2.2.1.2 Claimant's last-minute alternative valuation date of 4 June 2012 is also wrong

75. Knowing that its 29 May 2012 valuation date is unsustainable, Glencore came up with a last-minute alternative, which it presented for the first time in its Reply on Quantum. Claimant's allegedly undisputed new theory is that, during a 5 June 2012 press conference, Bolivia supposedly announced that it had taken a decision to nationalize Colquiri.[99] Claimant, thus, invokes Article 5(1) of the Treaty, and posits that Colquiri should be valued "*immediately before […] the impending expropriation became public knowledge*,"[100] *i.e.*, on 4 June 2020.

76. Despite finally acknowledging that the Treaty provides the appropriate standard of compensation for Colquiri's 'provisionally lawful' expropriation,[101] Claimant's new-found position is also not innocent, but only aimed at shielding Colquiri's FMV from the impact of the Rosario Agreement, which was entered into by Glencore and the *cooperativistas* on 7 June

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96 Reply on the Merits, ¶ 461 ("*Glencore Bermuda explained how Bolivia (i) failed to provide a transparent legal framework by conducting arbitrary and pretextual nationalizations, unsupported by fact or law and implemented in bad faith; (ii) violated Glencore Bermuda's legitimate expectations by taking the Assets without complying with due process and without providing any compensation, in breach of its international and domestic legal obligations, as well as its commitments under the Colquiri Lease; and (iii) did not engage in good faith negotiations with Glencore Bermuda following the takeovers and repeatedly failed to recognize the State's obligation to afford just compensation*.") (emphasis added), ¶¶ 489, 509-513.

97 *Compañía del Desarrollo de Santa Elena SA v Republic of Costa Rica* (ICSID Case No ARB/96/1) Final Award of 17 February 2000, **CLA-25**, ¶ 81.

98 Treaty, **C-1**, Article 5(1).

99 Reply on Quantum, ¶ 60.

100 Treaty, **C-1**, Article 5(1) ("*Such compensation shall amount to the market value of the investment expropriated immediately before the expropriation or before the impending expropriation became public knowledge, whichever is the earlier*") (emphasis added).

101 See above, Section 2.2.1.1, ¶¶ 60-61; Section 2.1, ¶¶ 25-28.

2012. More importantly, Claimant's attempt to present Colquiri's reversion as pre-decided and pre-announced is not only belated, but it is also factually and logically unsustainable, for the following four reasons.

77. *First*, Claimant's alternative valuation date is improperly advanced at the last minute. Claimant's new-found alternative relies on a newspaper article that was submitted by Claimant itself already with its Statement of Claim in 2017,[102] yet it is only in its Reply on Quantum that suddenly Claimant relies on it as an alleged basis for Colquiri's valuation date. In so doing, Claimant took an undue advantage of the Hearing (which had been limited to addressing only jurisdiction and the merits) in an attempt to gather support for its new theory. Now Claimant selectively quotes from the cross examination of Mr Mamani, a miner at Colquiri, as allegedly confirming its new-found position[103] – even though, as explained below, Claimant's reliance thereon is misplaced. Bolivia was deprived of the same opportunity to examine witnesses on issues of quantum and establish already at the Hearing that Colquiri's reversion was only being discussed as a potential alternative, without any final decision taken or publicly announced on 5 June 2012.

78. *Second*, Claimant's suggestion that the reversion of Colquiri was pre-decided and publicly announced finds no support even in the sources that Claimant purports to rely on. Claimant cites a 6 June 2012 newspaper article and Mr Mamani's cross examination at the Hearing on the Merits as allegedly confirming that "*on 5 June 2012 it was announced at a press conference that <u>the Government had decided</u> to nationalize the Colquiri Mine*."[104] This is unavailing.

79. On the one hand, the article that Claimant purports to rely on contradicts Claimant's assertion already from its title: "*Colquiri <u>miners demand that the Government nationalizes</u> the mine.*"[105] Regardless of what the miners may have demanded at that time, nothing was pre-decided or publicly announced by the State. To the contrary, as Mr Mamani and numerous news articles confirm, at that time, the Bolivian Government was only exploring the possibility of reverting the Mine as one among various alternatives, and only as the 'last solution' in an 'extreme

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102 "Mineros de Colquiri exigen al Gobierno nacionalizar la mina," *La Razón* of 6 June 2012, **C-124**.

103 Reply on Quantum, ¶ 60, citing to Transcript of the Hearing on the Merits, Day 3 (Spanish), P951:L20-P952:22; Transcript of the Hearing on the Merits, Day 3 (English), P739:L18-P740:L17 (Mamani, Cross).

104 Reply on Quantum, ¶ 60 (emphasis added), citing "Mineros de Colquiri exigen al Gobierno nacionalizar la mina," *La Razón* of 6 June 2012, **C-124** and Transcript of the Hearing on the Merits, Day 3 (English), P739:L18-P740:L17, Transcript of the Hearing on the Merits, Day 3 (Spanish), P951:L20-P952:22 (Mamani, Cross).

105 "Mineros de Colquiri exigen al Gobierno nacionalizar la mina," *La Razón* of 6 June 2012, **C-124** (unofficial English translation, emphasis added).

scenario,' were it to become necessary so as to prevent further violence.[106] But as of 5 June 2012, nothing was yet finally decided – let alone publicly announced – by Bolivia.

80. Besides, contrary to what this newspaper article suggested, Colquiri's reversion was not carried out on 6 June 2012,[107] but two weeks after, when Claimant's conclusion of the Rosario Agreement with the *cooperativistas* sparked the 'extreme scenario' that made the 'last solution' of reverting the Mine necessary. Only after the 7 June 2012 Rosario Agreement had the situation in Colquiri become so unworkable, that it "*prompted*," as Minister Romero confirmed, "*the Government's decision to retake control of the deposit and incorporate the cooperativistas into the company, as the only measure to end the conflict.*"[108]

81. On the other hand, it is telling that, even though Minister Romero was available for questioning at the Hearing and could testify on the Bolivian State's considerations at that time, Claimant chose not to put any question to him as to a purportedly public decision of the State

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106 Mamani I, ¶ 36; Transcript of the Hearing on the Merits, Day 3 (Spanish), P942:L1-P943:L20, P949:L21-P951:L19, Transcript of the Hearing on the Merits, Day 3 (English), P732:L12-P734:L3, P738:L4-P739:L17 (Mamani, Cross). See also La Patria, *Colquiri: Mineros suspenden labores y cooperativistas no aceptan veta*, press article of 5 June 2012, **C-118**, p. 2 ("*Optamos por el rechazo a la propuesta [de acceder a la veta 'San Antonio' en su totalidad] que nos dio el señor ministro*"); "La Fstmb se prepara para recuperar la mina Colquiri," *El Potosí* of 5 June 2012, **C-121** ("*El Gobierno propuso a los cooperativistas la ampliación de su área de trabajo a la veta San Antonio […] lo que incluso fue aceptado, en principio, por la empresa Sinchi Wayra, pero fue rechazado por los invasores. Vanos fueron los intentos de los ministros de Minería […] y de Trabajo,[…] además de los viceministros de Desarrollo Productivo Minero[…], y de Cooperativas Minera […] así como del presidente de la Corporación Minera de Bolivia (Comibol) […], para lograr un acuerdo el domingo. Inclusive, plantearon contratar a los cooperativistas, cederles algún espacio de sus concesiones, apoyo técnico y hasta inversiones, pero todo esto fue rechazado por los dirigentes […] Los afiliados a la cooperativa 26 de febrero, […] rechazaron todas las propuestas del Gobierno en busca de una salida pacífica al conflicto y plantearon la expulsión de la empresa Sinchi Wayra, filial de la suiza Glencore*") (Unofficial English translation: "*The Government proposed to the cooperative members the extension of their work area to the vein San Antonio[…] which was even accepted, in principle, by the company Sinchi Wayra, but was rejected by the invaders. Vain were the attempts of the Ministers of Mining […] and of Labor […], in addition to the Vice Ministers of Mining Productive Development, […], and Cooperativas Mineras, […], as well as the president of the Bolivian Mining Corporation (Comibol) […], to reach an agreement on Sunday. They even proposed hiring cooperatives, giving them some space of their concessions, technical support and even investments, but all this was rejected by the leaders […]The members of the cooperative 26 February […] rejected all the proposals of the Government in search of a way out of the conflict and they requested the expulsion of the company Sinchi Wayra, a subsidiary of the Swiss Glencore"*") (emphasis added); "Conflicto minero se agrava tras fracasar diálogo," *Los Tiempos* of 5 June 2012, **C-122** ("*El Gobierno propuso a los cooperativistas la ampliacion de su área de trabajo a la veta San Antonio, que inicia en la superficie, lo que incluso fue aceptado, en principio, por la empresa Sinchi Wayra, pero después fue rechazado por sus los cooperativistas*") (Unofficial English translation: "*The government proposed to broaden the working areas of the members of the cooperatives to include the San Antonio vein, which starts at the surface, this was even accepted in principle by Sinchi Wayra, but was later rejected by the members of the cooperatives.*") (emphasis added); "Gobierno plantea nacionalizar Colquiri para poner fin al conflicto minero," *La Patria* of 6 June 2012, **C-123** (Unofficial English translation of the title: "*The Government considers the nationalization of Colquiri to put an end to the mining conflict*"), p. 2 ("*Ayer, luego de una reunion con el ministro de Minerfa, Mario Virreira, realizada en Archivos de la Comibol, sector de San José, en la que se propuso la nacionalización como la última alternativa para evitar que exista enfrentamientos entre mineros sindicalizados y cooperativistas*") (Unofficial English translation "*Yesterday, after a meeting with the Minister of Mining, Mario Virreira, organized at the Archives of Comibol, San José sector, in which nationalization was proposed as the last alternative to avoid confrontation between unionized workers and cooperativistas.*") (emphasis added).

107 "Mineros de Colquiri exigen al Gobierno nacionalizar la mina," *La Razón* of 6 June 2012, **C-124**, p. 1 ("*El Ministro de Minería nos informó que se está elaborando el decreto para nacionalizar la mina para luego promulgarlo. Él nos dijo que hasta mañana (hoy [i.e. el 6 de junio de 2012]) se realizaría la medida*") (Unofficial English translation: "*The Minister of Mining informed us about the drafting of the nationalization decree, to be enacted thereafter. He told us that the measure would be taken until tomorrow (today [i.e. 6 June 2012])*").

108 Romero, ¶ 17.

to revert Colquiri on 5 June 2012. Instead, Claimant only chose to examine Mr Mamani on this point, who gave the interview in question in his capacity as a worker at the Mine and a union representative of other Mine workers. Mr Mamani was not speaking on behalf of the Bolivian State – nor could he speak of any decision regarding Colquiri. To the contrary, as Mr Mamani repeatedly acknowledged, both in the article and at the Hearing, by 5 June 2012, the decision of whether to revert the Mine still remained "*in the hands of the Executive*."[109]

82. [redacted][110][redacted][111]

83. [redacted][112] – [redacted]

84. In telling contrast, as had been put in Claimant's Notice of Arbitration, "*Glencore <u>immediately protested</u> directly to the President*," when "*<u>in an unforeseen turn of events</u>, […] on 10 June 2012, Vice-President García Linera announced on national television the Government's decision to nationalize the Colquiri Mine*."[113] Glencore's letter to Bolivia's President (which actually mentions two alleged announcements dated 11 and 12 June 2012, not 10 June 2012), was sent the very next day, 13 June 2012, and noted that Glencore was "*<u>particularly surprised</u>*

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109 "Mineros de Colquiri exigen al Gobierno nacionalizar la mina," *La Razón* of 6 June 2012, **C-124**, p. 1 (Unofficial English translation; Spanish original "*El dirigente afirmó que la decisión de expropiar dicho distrito minero está <u>en manos del Ejecutivo</u>*.") (emphasis added); Transcript of the Hearing on the Merits, Day 3 (English), P739:L6-7 ("*And I said, 'Well, ultimately, the Government is going to make a decision.'*") (Mamani, Cross). See also Transcript of the Hearing on the Merits, Day 3 (English), P732:L12-734:L5 (Mamani, Cross).

110 [redacted]

111 [redacted]

112 [redacted]

113 Claimant's Notice of Arbitration, ¶ 34 (emphasis added).

and concerned" of having learnt of such news, which were "*even more unexpected considering that last Thursday, 7 June 2012*" it had concluded the Rosario Agreement.[114]

85. While this letter shows that Claimant was oblivious to the extreme situation that the Rosario Agreement had triggered, Glencore's surprise confirms that it had no prior knowledge of a public decision to expropriate Colquiri that would have been taken on 5 June 2012 and announced in the press, as it now alleges. As Bolivia has explained, the actual final decision to revert Colquiri was only taken after a meeting between the Government, the Mine workers and the *cooperativistas* on 19 June 2012, while all prior announcements were still only addressing the different alternatives that had been on the table up to that point.[115] Nonetheless, it is still telling that Claimant does not purport to rely on any of the alleged declarations about Colquiri's reversion, dated 10, 11 or 12 June 2012, since none would not allow Claimant to avoid the Rosario Agreement's impact on Colquiri's FMV.

86. *Fourth*, Claimant's position that Colquiri's reversion had been decided and publicly known since 5 June 2012 also defies logic. Had Glencore really known that Colquiri's Reversion was already decided, it would not have entered into the negotiations that led to the Rosario Agreement. Nor would its counter-party, the *cooperativistas*, have any reason to negotiate with Glencore, since, per Claimant's position, by 5 June 2012, it would have been public knowledge that the Mine would be reverted to the State. However, the Rosario Agreement was nonetheless negotiated and concluded on 7 June 2012,[116] *i.e.*, two days after the alleged news of Colquiri's reversion – showing that Claimant's new position is logically incoherent.

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114 Letter from Glencore International (Mr Maté) to the President of Bolivia (Mr Morales) of 13 June 2012, **C-38bis**, pp. 1-2 (Unofficial English translation, emphasis added).

115 Rejoinder on the Merits, ¶¶ 320-324; La Patria, Mineros bloquean Conani exigiendo nacionalizar el 100% de mina Colquiri, *press article* of 13 June 2012, **C-134**, p. 2 ("*Según el secretario general del Sindicato de Trabajadores Mineros de Colquiri, Severino Estallani, no está clara la figura de la nacionalización de la mina, pues se pretende revertir para el Estado una parte del yacimiento y ceder otra a los cooperativistas que también estaban movilizados. Desde las 15:00 horas de ayer los mineros, que permanecían en vigilia en Conani desde el viernes pasado con bloqueos esporádicos, decidieron obstruir permanentemente la carretera, hasta que se efectúe una reunión con el vicepresidente del Estado Plurinacional de Bolivia, Álvaro García Linera para que se nacionalice toda la mina*") (Unofficial English translation: "*According to the secretary general of the Colquiri Mining Union, Severino Estallani, the option to nationalise the mine is not clear, since the intention is to revert to the State part of the deposit and assign another part to the cooperativistas who were also mobilised. Since yesterday at 15:00 the mining workers, who had been keeping watch in Conani since last Friday with sporadic blockades, decided to block the highway permanently, until a meeting is convened with the vicepresident of the Plurinational State of Bolivia, Álvaro García Linera, to nationalise the entire mine*") (emphasis added).

116 Statement of Claim, ¶ 220; Reply on the Merits, ¶ 136; Transcript of the Hearing on the Merits, Day 1 (English), P47:L1-8 (Claimant's Opening Statement).

87. For the foregoing reasons, both Claimant's original valuation date of 29 May 2012 and also its newly found alternative valuation date of 4 June 2012,[117] are legally, factually and even logically unsupported, and should be dismissed by the Tribunal.

88. Instead, given that the Colquiri Reversion Decree was issued on 20 June 2012 and that only after that date Bolivia entered the premises and took over the Mine,[118] Colquiri must be valued as of 19 June 2012, in accordance with Article 5(1) of the Treaty.[119]

2.2.2 The Correct Valuation Date For The Antimony Smelter Is 30 April 2010 (*i.e.*, The Date Immediately Before The Issuance Of The 1 May 2010 Antimony Reversion Decree)

89. It is uncontested that the Antimony Smelter reverted to the State following the issuance of the Antimony Reversion Decree of 1 May 2010.[120] Accordingly, assuming that the Antimony Smelter had been expropriated (*quod non*),[121] it must be valued as of 30 April 2010, *i.e.*, the day immediately before the alleged expropriation occurred.

90. However, Claimant insists that the Antimony Smelter must be valued as of the date of the award.[122] Claimant's position is that, supposedly by virtue of the customary principle of 'full reparation,' it should be free to choose between *the higher of* the values resulting from valuation dates at the time of the breach (*ex ante*) or the award (*ex post*), so as to maximize its entitlement to compensation. This is disingenuous.

91. *First*, as explained above, the applicable valuation standard to the alleged expropriations of all of Claimant's Assets is not the customary international law standard of 'full reparation', but the compensation standard in Article 5(1) of the Treaty.[123] The Treaty's compensation provision clearly provides that the valuation should take place at the date of breach, not the date of the award.[124] This is what must apply also to the valuation of the Antimony Smelter, for at least two reasons.

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117 Reply on Quantum, ¶ 57.

118 Supreme Decree No 1.264 of 20 June 2012, **C-39**; Statement of Defence, ¶¶ 709, 713.

119 Treaty, **C-1**, Article 5(1) ("*Such compensation shall amount to the market value of the investment expropriated immediately before the expropriation or before the impending expropriation became public knowledge, whichever is the earlier*") (emphasis added).

120 Supreme Decree No 499 of 1 May 2010, **C-26**; Statement of Claim, ¶¶ 77-78; Statement of Defence, ¶¶ 166, 884.

121 Bolivia's position on the merits remains that the Antimony Smelter was not expropriated, but reverted, in a legitimate exercise of Bolivia's police powers. See Transcript of the Hearing on the Merits, Day 1 (English), P129:L16-P131:L14 (Respondent's Opening Statement); Rejoinder on the Merits, Section 5.1.1; Statement of Defence, Section 6.1.1.

122 Reply on Quantum, Section III.B.1

123 See Section 2.1 above.

124 Treaty, **C-1**, Article 5(1) ("*Such compensation shall amount to the market value of the investment expropriated immediately before the expropriation or before the impending expropriation became public knowledge, whichever is the earlier*") (emphasis added).

92. One, as noted in Section 2.1 above, Claimant only complains that the taking of the Antimony Smelter was not accompanied by the payment of compensation, meaning that Claimant's claim is one for the 'provisionally lawful' expropriation of the Antimony Smelter.[125] In cases of 'provisionally lawful' expropriations, the treaty standards of compensation apply, so that compensation reflects the asset's fair market value at the date of dispossession (*i.e.,* a valuation *ex ante*). As put already by the *LIAMCO* tribunal,

> *in a lawful expropriation where the only wrongful act was the failure to pay the just price of what had been expropriated, the compensation due should be the value of the undertaking at the time of dispossession.*[126]

93. This approach has since been consistently followed by international tribunals.[127] As recently put by the *Magyar* tribunal, only "*a finding that expropriation is unlawful for reasons other than the lack of compensation may entitle a claimant investor to request compensation for the value of the expropriated asset on an ex post basis, i.e. on the date of the award.*"[128] *A contrario*, in cases like the present, where the Antimony Smelter's alleged expropriation only lacked the payment of compensation, the valuation must be carried on an *ex ante* basis.

94. Two, as explained above, the Contracting Parties chose to include in Article 5(1) of their Treaty a compensation provision that is general in scope and for which an expropriation's legality is irrelevant.[129] Claimant has not offered any reason why this Tribunal must disregard the Contracting Parties' explicit choice. Accordingly, like the *Rurelec* tribunal when applying

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125 See Section 2.1 above, ¶¶ 25-28.

126 *Libyan American Oil Company (LIAMCO) v. The Government of the Libyan Arab Republic*, Ad Hoc Arbitration, Award of 12 April 1977, **RLA-205**, ¶ 300 (emphasis added).

127 See, indicatively, *Amoco International Finance Corporation v Government of the Islamic Republic of Iran and others*, Partial Award (1987-Volume 15) Iran-US Claims Tribunal Report, **CLA-10**, ¶ 196 ("*the compensation to be paid in case of a lawful expropriation (or of a taking which lacks only the payment of a fair compensation to be lawful) is limited to the value of the undertaking at the moment of the dispossession, i.e., 'the just price of what was expropriated*.'"); *Tidewater Investment SRL and Tidewater Caribe, C.A. v. The Bolivarian Republic of Venezuela*, ICSID Case No. ARB/10/5, Award of 13 March 2015, **RLA-60**, ¶¶ 141-142 ("*An expropriation only wanting fair compensation has to be considered as a provisionally lawful expropriation, precisely because the tribunal dealing with the case will determine and award such compensation. […] compensation for a lawful expropriation is fair compensation represented by the value of the undertaking at the moment of dispossession*") (emphasis added); *Venezuela Holdings, B.V. and Others v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB/07/27, Award of 9 October 2014, **RLA-65**, ¶¶ 301, 306, 307; *ConocoPhillips Petrozuata B.V. and others v. Bolivarian Republic of Venezuela*, ICSID Case No ARB/07/30, Award of 8 March 2019, **RLA-203**, ¶¶ 219-220 ("*the investor that suffered an expropriation that was otherwise 'lawful' (except for the non-payment of compensation), is not entitled to claim for more than the payment by the host State of such compensation reflecting the market value of the investment at the moment of the expropriation, plus interest to the day of payment*.") (emphasis added).

128 *Magyar Farming Company Ltd and others v. Hungary*, ICSID Case No. ARB/17/27, Award of 13 November 2019, **RLA-206**, ¶ 369 (emphasis added). See also *Quiborax SA and Non Metallic Minerals SA v Plurinational State of Bolivia* (ICSID Case No ARB/06/2) Award of 16 September 2015, **CLA-127**, ¶ 377 ("*The Tribunal thus concludes by majority that, dealing with an expropriation that is unlawful not merely because compensation is lacking, its task is to quantify the losses suffered by the claimant on the date of the award*") (emphasis added).

129 See Section 2.1 above, ¶¶ 29-31. See also Statement of Defence, ¶¶ 719, 723; *British Caribbean Bank Ltd. v. Belize*, PCA Case No. 2010-18, Award of 19 December 2014, **RLA-105**, ¶ 260; *Les Laboratoires Servier, S.A.S., Biofarma, S.A.S., Arts et Techniques du Progres S.A.S. v. Republic of Poland*, PCA, Final Award of 14 February 2012, **RLA-48**, ¶¶ 571-575.

this very Treaty, this Tribunal must also "*continue to apply the terms of Article 5 of the UK-Bolivia BIT*,"[130] and carry out an *ex ante* valuation of the Antimony Smelter, regardless of whether it characterizes its alleged expropriation as 'provisionally lawful', or even unlawful.

95. *Second*, and in the alternative, even if the customary standard of 'full reparation' applied to the valuation of the Antimony Smelter, the Tribunal should nonetheless assess its value at the date of dispossession (*ex ante*). This is for at least two reasons.

96. One, it is simply not true that customary international law endorses Claimant's "*higher of*" approach to valuation dates, or that it allows Claimant to thus inflate the damages it seeks.

97. On the one hand, what customary international law actually endorses is that damages must be compensatory, and not punitive, in nature.[131] Compensation in international law and investment arbitration is neither meant to entitle investors to the largest possible returns, nor to punish the State. As explained above, compensation is meant to be the equivalent of restitution in kind, if said restitution had occurred at the time of the breach.[132] This does not make reparation any less 'full,' since any delays in effecting restitution or awarding compensation are already accounted for by interest.[133]

98. By awarding anything more than the equivalent to restitution in kind at the time of the breach because of an asset's allegedly higher value at some arbitrary point thereafter, the investor would be unjustly enriched, by receiving the benefit generated in a period during which it incurred no risks (had it incurred the risk of the asset, then the value claimed could have not only increased, but also decreased), without even knowing if the investor would have kept possession of the asset. At the same time, the State would essentially be 'punished,' as if it had foreseen the alleged increase in the asset's value and had intended to benefit from it, by expropriating the investor.

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130 *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 613.

131 International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, Article 36 - Commentary ¶ 4 ("*the function of compensation is to address the actual losses incurred as a result of the internationally wrongful act. In other words, the function of article 36 is purely compensatory, as its title indicates. Compensation corresponds to the financially assessable damage suffered by the injured State or its nationals. It is not concerned to punish the responsible State, nor does compensation have an expressive or exemplary character*") (emphasis added), and citations therein.

132 See Section 2.1 above, ¶¶ 40-42.

133 International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, Article 38 ("*Interest 1. Interest on any principal sum due under this chapter shall be payable when necessary in order to ensure full reparation. The interest rate and mode of calculation shall be set so as to achieve that result. 2. Interest runs from the date when the principal sum should have been paid until the date the obligation to pay is fulfilled*").

99. However, Claimant has neither established that the alleged increase in the real estate value of the Antimony Smelter's lands was foreseeable at the time of the taking, nor that Bolivia intended to benefit from said alleged increase when it reverted the Antimony Smelter. In this context, an *ex post* valuation of the Antimony Smelter would be contrary to the prohibition of punitive damages and unjust enrichment under international law.[134]

100. On the other hand, what customary international law certainly does not endorse is an entitlement for investors to freely pick and choose the time that it would be most profitable to value their investment. Claimant's position to that end is neither supported by the PCIJ's decision in *Chorzów*, which it quotes,[135] nor by the vast majority of international tribunals, which have consistently opted for an *ex ante*, and not an *ex post*, valuation of expropriations.

101. The PCIJ's decision in *Chorzów* stands for two propositions in relation to the awarding of damages in cases of expropriation, none of which favors Claimant's position for an *ex post* valuation of the Antimony Smelter.

102. The first proposition in the PCIJ's decision in *Chorzów* is that, in cases of an expropriation only lacking the payment of compensation, the amounts awarded are "*limited to the value of the undertaking at the moment of the dispossession, plus interest to the day of payment.*"[136] This confirms Bolivia's principal position, that, since the Antimony Smelter's alleged

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134 Concerning the prohibition of punitive damages in international law, see, indicatively, International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, Chapter III - Commentary ¶ 5 ("*The award of punitive damages is not recognized in international law even in relation to serious breaches of obligations arising under peremptory norms*."), footnote 516 ("*In the Velásquez Rodriguez, Compensatory Damages case, the Inter-American Court of Human Rights held that international law did not recognize the concept of punitive or exemplary damages (Series C, No. 7 (1989))*"); *Swisslion DOO Skopje v Former Yugoslav Republic of Macedonia* (ICSID Case No ARB/09/16) Award of 6 July 2012, **CLA-203**, ¶ 344 ("*it is not the Tribunal's role to award punitive damages*."); *SD Myers Inc v Government of Canada* (UNCITRAL) Second Partial Award of 21 October 2002, **CLA-39**, ¶ 6; *Waguih Elie George Siag and Clorinda Vecchi v Arab Republic of Egypt* (ICSID Case No ARB/05/15) Award of 1 June 2009, **CLA-89**, ¶¶ 544-545. Concerning the prohibition of unjust enrichment in international law, see, indicatively, *Venezuela Holdings, B.V. and Others v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB/07/27, Award of 9 October 2014, **RLA-65**, ¶ 378 and citations therein; *Saluka Investments BV v Czech Republic* (UNCITRAL) Partial Award of 17 March 2006, **CLA-62**, ¶ 449 ("*The concept of unjust enrichment is recognised as a general principle of international law*.") and citations therein; *Amoco International Finance Corporation v Government of the Islamic Republic of Iran and others*, Partial Award (1987-Volume 15) Iran-US Claims Tribunal Report, **CLA-10**, ¶ 225 ("*[the Tribunal's] first duty is to avoid any unjust enrichment or deprivation of either Party*").

135 Reply on Quantum, ¶ 15, citing *Case Concerning the Factory at Chorzów* (*Germany/Poland)* (Merits) [1928] PCIJ Series A, No 17, **CLA-2**, p. 46.

136 *Case Concerning the Factory at Chorzów* (*Germany/Poland)* (Merits) [1928] PCIJ Series A, No 17, **CLA-2**, p. 47 ("*It follows that the compensation due to the German Government is not necessarily limited to the value of the undertaking at the moment of dispossession, plus interest to the day of payment. This limitation would only be admissible if the Polish Government had had the right to expropriate, and if its wrongful act consisted merely in not having paid to the two Companies the just price of what was expropriated*"), p. 46 ("*[t]he action of Poland which the Court has judged to be contrary to the Geneva Convention is not an expropriation to render which lawful only the payment of fair compensation would have been wanting*") (emphasis added).

expropriation is 'provisionally lawful,' it must be valued "*at the moment of the dispossession,*" *i.e., ex ante* as the Treaty's compensation standard provides.[137]

103. The PCIJ's second proposition in *Chorzów* is that the awarding of compensation which "*is not necessarily limited to the value of the undertaking at the moment of dispossession*" is only reserved for cases where the State's wrongful act was not limited to the non-payment of compensation.[138] Even assuming that this was somehow the case with the Antimony Smelter's reversion (*quod non*), the way in which the PCIJ articulated the standard of 'full reparation' applicable in such cases confirms that Claimant cannot rely on *Chorzów* to seek an *ex post* valuation of the Antimony Smelter. As put by the PCIJ:

> *The essential principle […] is that reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed.*[139]

104. The use of the phrase "*in all probability*" is essential to understanding the *Chorzów* decision. The PCIJ does not say that 'full reparation' must reflect what actually occurred after the taking but instead, that it must reflect a hypothetical value, which the investment could "*in all probability*" have obtained, on the basis of data known at the time of the taking, *i.e., ex ante*. The phrases "*reestablish the situation*" and "*if that act had not been committed*" further confirm that the investor must be returned to its *ex ante* condition, and thus that the investment's compensable value is the one which would have appeared the most probable at the time of dispossession.[140]

105. Accordingly, a proper understanding of the PCIJ's decision in *Chorzów* confirms that Claimant may not rely on it to seek an *ex post* valuation of the Antimony Smelter.

106. Besides, and more pertinently than the PCIJ's 92-year old inter-State decision, the vast majority of arbitral tribunals confirm that the valuation of an investment's expropriations must be carried out as of the date of dispossession (*ex ante*), and not the date of the award (*ex post*).

107. Five years ago, in her 2015 Dissenting Opinion in *Quiborax*, Professor Stern had noted that "*in almost thirty years of investment arbitration,*" there had been "*only four treaty cases*"

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137 Treaty, **C-1**, Article 5(1) ("*Such compensation shall amount to the market value of the investment expropriated immediately before the expropriation or before the impending expropriation became public knowledge, whichever is the earlier*") (emphasis added); *Case Concerning the Factory at Chorzów* (*Germany/Poland)* (Merits) [1928] PCIJ Series A, No 17, **CLA-2**, p. 47.

138 *Case Concerning the Factory at Chorzów* (*Germany/Poland)* (Merits) [1928] PCIJ Series A, No 17, **CLA-2**, p. 47.

139 *Case Concerning the Factory at Chorzów* (*Germany/Poland)* (Merits) [1928] PCIJ Series A, No 17, **CLA-2**, p. 47.

140 *Case Concerning the Factory at Chorzów* (*Germany/Poland)* (Merits) [1928] PCIJ Series A, No 17, **CLA-2**, p. 47.

which had valued expropriations based on "*the date of the award and ex post data.*"[141] To these four cases, another three can be added, *i.e.*, the majority decision in *Quiborax*, the *von Pezold* tribunal and the majority decision in *Burlington* – the latter two being the only other cases which Claimant has cited in support of its position and which post-date 2015.[142] Even so, Professor Stern's remarks hold no less true: these, now, seven cases that employed an *ex post* valuation of expropriations still represent "*an ultra-minority position*," when

> *compared to the hundreds of cases relying on the date of expropriation and what was foreseeable on that date, in other words, the hundreds of awards which have granted, in case of expropriation, both lawful and unlawful, the fair market value of the expropriated property, evaluated at the date of the expropriation, with the knowledge at that time.*[143]

108. The prevailing approach in arbitral jurisprudence remains that, in cases of expropriation, tribunals calculate the damages due by appraising the investment's fair market value at the time that it was lost, without taking into account subsequent events.[144] As recently put by the *Perenco* tribunal, it is "*the orthodox approach […] for a claimant to identify the damages caused by each breach at the time of its occurrence*."[145]

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141 *Quiborax SA and Non Metallic Minerals SA v. Plurinational State of Bolivia*, ICSID Case No ARB/06/2, Partially Dissenting Opinion of Prof. Brigitte Stern of 7 September 2015, **RLA-207**, ¶ 43, the four cases being *ADC Affiliate Limited and ADC & ADMC Management Limited v Republic of Hungary* (ICSID Case No ARB/03/16) Award of the Tribunal of 2 October 2006, **CLA-64**; *Siemens AG v Argentine Republic* (ICSID Case No ARB/02/8) Award of 6 February 2007, **CLA-67**; *ConocoPhillips Petrozuata BV and others v Bolivarian Republic of Venezuela* (ICSID Case No ARB/07/30) Decision on Jurisdiction and the Merits of 3 September 2013, **CLA-117** and *Yukos Universal Limited (Isle of Man) v Russian Federation* (PCA Case No AA 227) Final Award of 18 July 2014, **CLA-122**.

142 *Quiborax SA and Non Metallic Minerals SA v Plurinational State of Bolivia* (ICSID Case No ARB/06/2) Award of 16 September 2015, **CLA-127**, ¶ 377; *Bernhard von Pezold and others v Republic of Zimbabwe* (ICSID Case No ARB/10/15) Award of 28 July 2015, **CLA-126**, ¶ 813; *Burlington Resources, Inc v Republic of Ecuador* (ICSID Case No ARB/08/5) Decision on Reconsideration and Award of 7 February 2017, **CLA-134**, ¶ 326.

143 *Quiborax SA and Non Metallic Minerals SA v. Plurinational State of Bolivia*, ICSID Case No ARB/06/2, Partially Dissenting Opinion of Prof. Brigitte Stern of 7 September 2015, **RLA-207**, ¶¶ 43-44 (emphasis added).

144 See, indicatively, *Murphy Exploration and Production Company International v. Republic of Ecuador [II]*, PCA Case No. 2012-16, Partial Final Award, **RLA-99**, ¶ 482 ("*Investor-state arbitral tribunals have frequently sought to establish the fair market value at the time of the investor's loss of its primary investment as a basis for the calculation of damages. It is also the prevailing approach in financial accounting to consider the ex-ante appraisal of an asset as of a certain valuation date without taking into account subsequent developments.*"); *Flughafen Zürich A.G. and Gestión e Ingeniería IDC S.A. v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB/10/19, Award of 18 November 2014, **RLA-107**, ¶ 747; *Sistem Mühendislik Inşaat Sanayi ve Ticaret A. v. Kyrgyz Republic*, ICSID Case No. ARB(AF)/06/1, Award of 9 September 2009, **RLA-67**, ¶¶ 119, 121, 189; *Rumeli Telekom AS and Telsim Mobil Telekomikasyon Hizmetleri AS v Republic of Kazakhstan* (ICSID Case No ARB/05/16) Award of 29 July 2008, **CLA-79**, ¶ 793; *Enron Corporation and Ponderosa Assets LP v Argentine Republic* (ICSID Case No ARB/01/3) Award of 22 May 2007, **CLA-68**, ¶¶ 389, 405, 420-423, 436; *Azurix Corp v Argentine Republic* (ICSID Case No ARB/01/12) Award of 14 July 2006, **CLA-63**, ¶¶ 417-418, 424-433; *SD Myers Inc v Government of Canada* (UNCITRAL) Second Partial Award of 21 October 2002, **CLA-39**, ¶ 140; *CME Czech Republic BV v Czech Republic* (UNCITRAL) Partial Award of 13 September 2001, **CLA-32**, ¶¶ 583-585; *Compañía del Desarrollo de Santa Elena SA v Republic of Costa Rica* (ICSID Case No ARB/96/1) Final Award of 17 February 2000, **CLA-25**, ¶ 8; *Antoine Goetz & others and S.A. Affinage des Metaux v. Republic of Burundi*, ICSID Case No. ARB/95/3, Award of 10 February 1999, **RLA-122**, ¶¶ 133-135.

145 *Perenco Ecuador Limited v. The Republic of Ecuador*, ICSID Case No. ARB/08/6, Award of 27 September 2019, **RLA-204**, ¶ 74 (emphasis added). See also *Perenco Ecuador Limited v. The Republic of Ecuador*, ICSID Case No. ARB/08/6, Award of 27 September 2019, **RLA-204**, ¶¶ 115-116.

109. In short, Claimant's insistence on a supposed entitlement to simply pick the "*higher of*" the available valuation dates for the Antimony Smelter finds no support in either the PCIJ's decision in *Chorzów* or in contemporary arbitral jurisprudence, and should thus be rejected.

110. Two, as Bolivia has previously explained, the Tribunal should not opt for a valuation of the Antimony Smelter as of the date of an eventual award, because such date is arbitrary.[146]

111. Customary international law has settled on assessing quantum at the time of the expropriation because it is arbitrary to use the date of an award, and thus vary the awarded compensation based on the moment the award is issued.[147] The use of the arbitrary date of an eventual award for valuation would unfairly impose the equivalent of punitive damages on the State, contrary to international law,[148] and for reasons entirely unconnected to the underlying act of the State. The date of the award has no inherent or objective connection to the breach committed or the damage suffered. Only the timing of the breach enjoys such a relationship.[149]

112. In its Reply on Quantum, Claimant has neither addressed this argument, nor has it justified its preference for the Antimony Smelter's valuation at the date of the award on any other grounds, apart from its suggestion that it would be more profitable.

113. On the one hand, however, as explained in Section 4.3 below, Claimant has not proven that an *ex post* valuation of the Antimony Smelter would actually be more profitable than one *ex ante*. Claimant and Ms Russo have failed to account for zoning and developmental limitations, and the significant closure, demolition and environmental remediation costs affecting any present or future value of the Antimony Smelter. When these costs and limitations are accounted for, it becomes clear that the Antimony Smelter was, and remains, a liability, not an asset, and thus, that it's *ex post* value is not higher than its value *ex ante*.

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146 Statement of Defence, ¶ 724.

147 *Quiborax SA and Non Metallic Minerals SA v. Plurinational State of Bolivia*, ICSID Case No ARB/06/2, Partially Dissenting Opinion of Prof. Brigitte Stern of 7 September 2015, **RLA-207**, ¶ 85.

148 See, indicatively, International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, Chapter III - Commentary ¶ 5 ("*The award of punitive damages is not recognized in international law even in relation to serious breaches of obligations arising under peremptory norms*."), footnote 516 ("*In the Velásquez Rodriguez, Compensatory Damages case, the Inter-American Court of Human Rights held that international law did not recognize the concept of punitive or exemplary damages (Series C, No. 7 (1989))*"); *Swisslion DOO Skopje v Former Yugoslav Republic of Macedonia* (ICSID Case No ARB/09/16) Award of 6 July 2012, **CLA-203**, ¶ 344 ("*it is not the Tribunal's role to award punitive damages*."); *SD Myers Inc v Government of Canada* (UNCITRAL) Second Partial Award of 21 October 2002, **CLA-39**, ¶ 6; *Waguih Elie George Siag and Clorinda Vecchi v Arab Republic of Egypt* (ICSID Case No ARB/05/15) Award of 1 June 2009, **CLA-89**, ¶¶ 544-545.

149 *Quiborax SA and Non Metallic Minerals SA v. Plurinational State of Bolivia*, ICSID Case No ARB/06/2, Partially Dissenting Opinion of Prof. Brigitte Stern of 7 September 2015, **RLA-207**, ¶ 83.

114. On the other hand, it simply cannot be right to apply the valuation date that imposes harsher damages on the State just because this would favor the investor. Allowing Claimant to freely choose between a valuation *ex post*, in case external factors (such as real estate values) increased an asset's value, or a valuation *ex ante*, in case these factors caused the asset's value to drop, would effectively provide Claimant with a free insurance against not only political risk, but any type of risk. This kind of 'heads I win, tails you lose' scenario, where the losing side would always be the State cannot be right, and is certainly not what the customary international law standard of full reparation was meant to provide.

115. As Professor Stern observed in her Dissenting Opinion in *Quiborax*, "*[a] legal solution cannot just be based on what is more favorable to one of the parties*."[150] The fair approach is to consistently evaluate compensation at the time of the breach (as Claimant in fact requests for all their other Assets) and from the perspective of what was truly foreseeable at the time of the loss.

116. In conclusion, Claimant cannot simply pick and choose whichever date it considers to be more profitable as a valuation date for the Antimony Smelter. Either by virtue of Article 5 of the Treaty, or under a proper understanding of the 'full reparation' standard and in line with arbitral jurisprudence the Antimony Smelter must be valued *ex ante, i.e.*, as of 30 April 2010.

2.3 Claimant Is Also Wrong On The Standard For Proving The *Existence* Of Damages (As Distinct From Its *Quantification*) And Still Fails To Discharge Its Burden To Prove The Claimed Damages With Sufficient Certainty

117. Attempting to conceal the speculative character of its damages' valuations, Claimant conflates the standard for proving the *existence* of damages with that for proving *their amount*. However, the two standards are distinct, and proving the existence of damages is clearly more demanding (**Section 2.3.1**). In this case, Claimant has not and cannot establish the existence of its claimed damages with the necessary degree of certainty (**Section 2.3.2**).

2.3.1 The Standards For Proving The Existence Of Damages And Their Amount Are Different

118. Claimant wrongly accuses Bolivia of improperly invoking the burden of proof for the quantification of the amount of damages to defeat Claimant's claims for compensation.[151] It is actually Claimant that improperly conflates the standard for proving the *existence* of

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150 *Quiborax SA and Non Metallic Minerals SA v. Plurinational State of Bolivia*, ICSID Case No ARB/06/2, Partially Dissenting Opinion of Prof. Brigitte Stern of 7 September 2015, **RLA-207**, ¶ 56.

151 Reply on Quantum, ¶ 26.

damages with that for proving their *amount*, as the latter is lower and, thus, more favorable to Claimant's speculative claims.

119. Hoping that this would go unnoticed, Claimant avoids addressing the *existence* of damages altogether and instead, posits that the Parties agree that "*the standard of proof does not entail 'establishing with 100% certainty the exact amount of damages claimed.*"[152] Claimant then suggests that the applicable standard of proof is "*a balance of probabilities*," because "*proving the amount of damages 'is not an exercise in certainty but […] in sufficient certainty*'."[153]

120. However, Claimant's attempt to conflate these two distinct standards is as apparent, as it is disingenuous. As in the *Micula* case, here too, "*the cases cited by the Claimant[] call for leniency in the assessment of the amount of damage, not of its existence*."[154]

121. *First*, the standard for proving the existence of damages is both distinct from and higher than the one for proving their amount. A showing of 'sufficient probability' may be enough to establish the amount of damages sought, but before that, the very existence of damages must be proven with certainty. Claimant's own authority, the *Crystallex* tribunal, confirms this and disproves Claimant's position, by clarifying that:

> *First, the fact (i.e., the existence) of the damage needs to be proven with certainty. […] Second, once the fact of damage has been established, a claimant should not be required to prove its exact quantification with the same degree of certainty*.[155]

122. Like the vast majority of arbitral awards, Claimant's authorities also recognize this distinction between proving the existence of damages and their subsequent quantification, and only support a probabilistic assessment of the extent of damages, not of their existence.[156] Thus,

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152 Reply on Quantum, ¶ 25, quoting Statement of Defence, ¶ 622 (emphasis added).

153 Reply on Quantum, ¶ 26.

154 *Ioan Micula and others v Romania* (ICSID Case No ARB/05/20) Award of 11 December 2013, **CLA-119**, ¶ 1008 (emphasis added).

155 *Crystallex International Corporation v Bolivarian Republic of Venezuela* (ICSID Case No ARB(AF)/11/2) Award of 4 April 2016, **CLA-130**, ¶¶ 865-876.

156 *Compañía de Aguas del Aconquija SA and Vivendi Universal SA v Argentine Republic* (ICSID Case No ARB/97/3) Award of 20 August 2007, **CLA-70**, ¶ 8.3.3 ("*The Tribunal notes that even in the authorities relied on by Claimants, compensation for lost profits is generally awarded only where future profitability can be established (the fact of profitability as opposed to the amount) with some level of certainty*") (emphasis added), ¶ 8.3.16 ("*it is well settled that the fact that damages cannot be fixed with certainty is no reason not to award damages when a loss has been incurred*") (emphasis added); *Impregilo SpA v Argentine Republic* (ICSID Case No ARB/07/17) Award of 21 June 2011, **CLA-105**, ¶ 371 ("*it would be unreasonable to require precise proof of the extent of the damage sustained by Impregilo*."); *South American Silver Limited v Plurinational State of Bolivia* (PCA Case No. 2013-15), Award of 22 November 2018, **CLA-252**, ¶ 825 ("*The Respondent is correct that the damage needs to be certain although the Tribunal notes that mathematical or absolute certainty is not required. In particular, when it comes to estimating future damages, it is impossible to achieve total certainty and what the Tribunal requires is evidence that establishes with a particular degree of certainty that, on the one hand, the variables on which a calculation is based have a solid foundation and a reasonable probability of occurrence, and, on the other hand, that the combination of such variables yields a high level of probability that the result would actually correspond to the damage suffered by the investor. […] The foregoing rules out calculations based on premises or variables that do not produce a reliable degree of certainty, and, obviously,*

Claimant is wrong to conflate two distinct standards of proof, in the hope that it could set a lower threshold for proving the existence of its speculative damages.

123. *Second*, Claimant is also wrong to contest that the requirement for the existence of damages to be proven with sufficient certainty would effectively rule out compensation for projects that are not going concerns – and all the more so, for projects yet unbuilt. In fact, once again, Claimant relies on inapposite jurisprudence in support of its position.

124. On the one hand, the *Vivendi* award cited by Claimant acknowledges the possibility of awarding lost profits when the existence of future profitability can be established with some certainty, but these findings expressly relate to *going concerns*, not to projects yet unbuilt.[157]

125. On the other hand, Claimant's reliance on the *Crystallex* tribunal is irrelevant to the question of awarding lost profits for a project yet unbuilt. In fact, the *Crystallex* tribunal only provides that, as Bolivia argues, "*once the fact of damage has been established, a claimant should not be required to prove its exact quantification with the same degree of certainty*."[158]

126. As regards lost profits, Bolivia has already explained that tribunals have acknowledged the possibility of awarding future lost profits in cases of going concerns, but have never applied this to projects with no proven record of profitability – let alone to projects yet unbuilt.[159] As the *South American Silver* tribunal explained, even the heightened degree of scrutiny applied to claims for future lost profits cannot make up for the speculation surrounding an unbuilt project's potential future performance. In the words of the *South American Silver* tribunal:

> *when it comes to estimating future damages, […] what the Tribunal requires is evidence that establishes with a particular degree of certainty that, on the one hand, the variables on which a calculation is based have a solid foundation and a*

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variables that are merely speculative.") (emphasis added); *BG Group Plc. v. The Republic of Argentina*, UNCITRAL, Final Award of 24 December 2007, **RLA-100**, ¶ 428 ("*Damages that are 'too indirect, remote, and uncertain to be appraised' are to be excluded. In line with this principle, the Tribunal would add that an award for damages which are speculative would equally run afoul of 'full reparation' under the ILC Draft Articles.*") (emphasis added). See also, indicatively, *Joseph Charles Lemire v Ukraine* (ICSID Case No ARB/06/18) Award of 28 March 2011, **CLA-104**, ¶ 246 ("*The Tribunal agrees that it is a commonly accepted standard for awarding forward looking compensation that damages must not be speculative or uncertain, but proved with reasonable certainty; the level of certainty is unlikely, however, to be the same with respect to the conclusion that damages have been caused, and the precise quantification of such damages*"); *Técnicas Medioambientales Tecmed SA v United Mexican States* (ICSID Case No ARB(AF)/00/2) Award of 29 May 2003, **CLA-43**, ¶ 190 ("*any difficulty in determining the compensation does not prevent the assessment of such compensation where the existence of damage is certain*") (emphasis added).

157 *Compañía de Aguas del Aconquija SA and Vivendi Universal SA v Argentine Republic* (ICSID Case No ARB/97/3) Award of 20 August 2007, **CLA-70**, ¶ 8.3.3 ("*The Tribunal accepts, in principle, that fair market value may be determined with reference to future lost profits in an appropriate case. Indeed, theoretically, it may even be the preferred method of calculating damages in cases involving the appropriation of or fundamental impairment of going concerns*") (emphasis added).

158 *Crystallex International Corporation v Bolivarian Republic of Venezuela* (ICSID Case No ARB(AF)/11/2) Award of 4 April 2016, **CLA-130**, ¶ 868.

159 Statement of Defence, ¶¶ 619-626.

> *reasonable probability of occurrence, and, on the other hand, that the combination of such variables yields a high level of probability that the result would actually correspond to the damage suffered by the investor. The foregoing rules out calculations based on premises or variables that do not produce a reliable degree of certainty, and, obviously, variables that are merely speculative, […] The case before this Tribunal is about a Project that is not in the production stage and for which it is not possible, as accepted by both Parties, to estimate future cash flows.*[160]

127. Accordingly, the requirement that the existence of damages must be proven with certainty effectively rules out compensation for projects yet unbuilt, as it makes the related claims inherently speculative. As explained below, this point is particularly relevant in relation to Claimant's speculative compensation request for the Colquiri Old Tailings Reprocessing Project – a project not even approved or financed, let alone built, by Claimant but which nonetheless represents almost 25% of the damages that Claimant seeks in relation to Colquiri.

128. In conclusion, even by Claimant's own authorities, the 'balance of probabilities' standard may apply to the quantification of damages, but not to establishing their existence. It is not sufficient that the existence of damages is more likely than not – it must be certain. As shown below, Claimant's valuations come nowhere near this necessary threshold of certainty.

2.3.2 The Reply Confirms That Claimant Cannot Establish The *Existence* Of Damages With Sufficient Certainty, As Confirmed By Its Speculative And Unrealistic Valuations

129. Claimant has not established the existence of damages with sufficient certainty for any of its damages claims as demonstrated by the fact that the valuations of the Colquiri Lease (**Section 2.3.2.1**), the Tin Smelter (**Section 2.3.2.2**) and the Antimony Smelter (**Section 2.3.2.3**) are entirely speculative.

2.3.2.1 Claimant's Valuation Of The Colquiri Mine Lease Is Premised On Mere Speculation

130. As explained in Section 2.3.1 above, it is a well-established principle that the claimant bears the burden of proving the existence of damages allegedly suffered with certainty.

131. In its Statement of Defence Bolivia demonstrated that, far from complying with such requirement, Claimant's experts valued the Colquiri Mine Lease premised on mere (and abusive) speculation. As Bolivia asserted, "*Claimant's experts have gone into making assumptions (most likely on instruction of Claimant) that are so far removed from reality that they appear to be valuing a 'magical mine'.*"[161]

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160 *South American Silver Limited v Plurinational State of Bolivia* (PCA Case No. 2013-15), Award of 22 November 2018, **CLA-252**, ¶¶ 824-826 (emphasis added).

161 Statement of Defence, ¶ 629.

132. In its Reply on Quantum, Claimant attempts to demonstrate that "*rather than magic, RPA's projections are based on hard data and mining practices accepted around the world*".[162] This is false. Claimant has failed to discharge its burden of proving that it has suffered damages that are certain.

133. *First*, Claimant continues to base key assumptions of its valuation (*i.e.*, mineral reserves and resources, head grades, metallurgical recovery rates, capital investments, and operating costs) solely on a document it calls the Triennial Plan.[163] This document, allegedly prepared in July 2011 (almost **1 year** before the reversion of the Lease),[164] lacked analyses on its economic viability, was never approved and was never implemented by Claimant; it is only a piece of paper (**Section 2.3.2.1(a)**). Yet, it is the only document that Claimant puts forth in this arbitration to support its highly speculative valuation of the Colquiri Mine Lease.

134. *Second*, RPA and Compass Lexecon are valuing a *magical* Mine where (i) resources and reserves are automatically delineated (**Section 2.3.2.1(b)**), and (ii) production reaches historical maximums as a result of negligible capital expenditures, without the workforce to support such increases and despite the Mine's well-known bottlenecks (**Section 2.3.2.1(c)**). Claimant's valuation is fundamentally mistaken.

135. *Third*, Claimant includes in its already unrealistic valuation an old project with preliminary samplings between 1978 and 1996,[165] which was expected to reprocess tailings generated by the ore processing activities of the Colquiri Mine.[166] Claimant assumes that this project (which it values in US$ 99 million) would have been implemented shortly after the reversion of the Colquiri Mine Lease, even though (i) its economic viability is uncertain at best, (ii) it was not mentioned in the Triennial Plan or in any other contemporaneous documentation, and (iii) it was never implemented (**Section 2.3.2.1(d)**). Therefore, any value attributed to this project (which was most likely "revived" by Claimant just for the purposes of this arbitration) is completely speculative.

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162 Reply on Quantum, ¶ 82.¶

163 Reply on Quantum, ¶ 67.

164 2012-2014 Colquiri Mine Three-year Plan, **C-108**.

165 See SRK II, ¶ 70.

166 Reply on Quantum, ¶ 9 (a).

a) The Triennial Plan was neither approved nor implemented, and lacked economic viability

136. *In limine*, it is not in dispute that RPA and Compass Lexecon have based their valuation of the Colquiri Mine Lease entirely on the Triennial Plan, taken at face value. This is misplaced for, a least, four reasons:

137. *First*, the Triennial Plan lacks any supporting economic studies (or others) that show its viability. As SRK noted in its first expert report, "*[t]he Triennial Expansion Plan allegedly prepared by Colquiri in 2011 was a sort of "Vision", but the document does not have an economics section (to justify the high capital investment required) nor any analysis of investment returns*."[167] This is illustrated by the following facts:

138. One, in the document production phase, Bolivia requested "*the Documents supporting the data and statements in the Triennial Plan, specifically, […] the economic and/or financial analyses […]*".[168] In response, Claimant only disclosed five documents that did not contain any analysis of the Triennial Plan's economic viability.[169]

139. Two, RPA and Compass Lexecon did not perform an independent analysis of the economic or technical viability of the Triennial Plan. This is confirmed by Claimant's objections during the document production phase. Bolivia requested Claimant to produce "*[t]he Documents supporting the data and statements in the Triennial Plan […]*",[170] and Claimant responded that "*[t]he Requested Documents are […] voluminous and difficult to locate*."[171] Had Claimant's experts requested the Triennial Plan's supporting documents and evaluated its economic reasonability (instead of taking it at face value), this information would have been readily available.

140. Three, during the document production phase Claimant disclosed documents containing economic analyses of other plans Sinchi Wayra had prepared in the past.[172] For example, Claimant produced Sinchi Wayra's 10-year plan for 2008-2017, which contained detailed forecasts for production, revenues, prices, costs and investments.[173] Claimant, however, produced no such economic analysis for the Triennial Plan. Had the Triennial Plan been of

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167 SRK I, ¶ 58 (emphasis added). See also SRK II, ¶ 23.

168 Annex 2 to Procedural Order No. 9 of 30 September 2019, Request 3, p. 18.

169 See Documents produced by Claimant for Request 3, **R-420**.

170 Annex 2 to Procedural Order No. 9 of 30 September 2019, Request 3, p. 18.

171 Annex 2 to Procedural Order No. 9 of 30 September 2019, Request 3, p. 19.

172 See Documents produced by Claimant for Request 15, **R-421**.

173 Sinchi Wayra S.A. 10 year plan, 2008-2017, GB013989, **R-422**.

the "vital" importance Claimant contends and its implementation ongoing, similar economic analyses would have existed.

141. Four, despite the lack of economic studies, Claimant contends that the Triennial Plan was completed "*with the assistance of independent mining consultants*"[174] that were "*hired by Colquiri as project managers to lead the expansion projects […] [o]nce the Triennial Plan was completed*".[175] To support this assertion, Claimant relies solely on Mr Lazcano's witness statement, who affirms, without any documentary support, that Eng Caballero and Eng Ignacio, the allegedly independent consultants, worked thoroughly during several months before the Triennial Plan's approval:

> *analiz[ando] las diferentes alternativas posibles para ejecutar cada proyecto, evalu[ando] las ventajas, costos y tiempos de cada una de las alternativas posibles y diseñ[ando] la ingeniería y realiz[ando] los cálculos necesarios para implementarlas […] [hasta que] [l]uego de aprobado el Plan Trienal, los ingenieros Caballero e Ignacio fueron contratados por Sinchi Wayra como como gerentes de los proyectos de la Rampa Principal y la Planta Concentradora, respectivamente, a fin de implementar sus propuestas.*[176]

142. However, documents produced (and not produced) by Claimant during the document production phase demonstrate that Claimant's assertions are unsupported.[177] For instance, in relation to Eng Caballero, Claimant only disclosed a permanent employment contract signed between Eng Caballero and Sinchi Wayra on 13 June 2011 that does not mention, in any of its provisions, neither the Triennial Plan nor the Main Ramp project.[178] Therefore, it constitutes no proof that Eng Caballero performed the analyses, evaluations, designs and calculations that Mr Lazcano recalls.

143. Moreover, the permanent employment contract was signed one month before the Triennial Plan was allegedly presented to Sinchi Wayra's executives.[179] Therefore, the contract

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174 Reply on Quantum, ¶ 73.

175 Reply on Quantum, footnote 142.

176 Lazcano III, ¶ 23, 25 (emphasis added) (Unofficial translation: "*analys[ing] the different possible alternatives to execute every project, evaluat[ing] the advantages, costs and times of every possible alternative and design[ing] the engineering and ma[king] the necessary calculations to implement them […] [until] after the approval of the Triennial Plan engineers Caballero and Ignacio were hired by Sinchi Wayra as project managers of the Main Ramp and the Concentrator Plant, respectively, to implement their proposals*").

177 See Documents produced by Claimant for Request 1, **R-423**; Documents produced by Claimant for Request 3, **R-420**; Documents produced by Claimant for Request 4, **R-424**.

178 Permanent Employment Contract between C. Caballero and Sinchi Wayra S.A., GB013632 of 13 June 2011, **R-425**.

179 Permanent Employment Contract between C. Caballero and Sinchi Wayra S.A., GB013632 of 13 June 2011, **R-425**, p. 4.

disproves Mr Lazcano's statement that Eng Caballero was hired "*luego de aprobado el Plan Trienal, […] a fin de implementar [su propuesta]*."[180]

144. *Second*, had the Triennial Plan been approved, one would expect documents showing such approval exists. Claimant has produced none.

145. In its Statement of Defence, Bolivia noted that Claimant had submitted no evidence of the Triennial Plan's approval.[181] [redacted][182] This situation has not changed to date. There is still not even a single shred of evidence demonstrating the approval of the Triennial Plan, which is simply impossible for a long-term investment amounting to US$ 47.3 million in expansion CAPEX.[183]

146. One, it is telling that, despite Bolivia's criticism, Glencore has failed again to provide evidence of the approval of the Triennial Plan in its Reply on Quantum. Instead, Claimant continues to rely solely in the naked statements of Mr Eskdale and Mr Lazcano,[184] which are clearly insufficient to support a plan of the magnitude and importance Claimant attributes to the Triennial Plan.

147. During the document production phase, Bolivia requested Claimant to produce "*[d]ocuments and Communications prepared and/or reviewed by Colquiri and/or Sinchi Wayra and/or the Glencore Group that refer to the approval […] of the Triennial Plan*"[185] – for the period October 2004 to June 2012. Out of more than 60 documents that Bolivia received in response to this request, not a single one consists of the approval of the Triennial Plan.[186]

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180 Lazcano III, ¶ 25.

181 Statement of Defence, ¶ 639 ("*There are no internal approvals of the Triennial Plan, no investment authorizations, no authorization for expenditures, etc., in the more than 10 months between the date in which the Plan was allegedly prepared (July 2011) and the date in which the Mine Lease was reverted (June 2012). There is no engineering for the projects forecasted in the Plan either. What happened with this Plan after July 2011 is a mystery, yet Claimant's experts' analysis is entirely premised on it*").

182 [redacted]

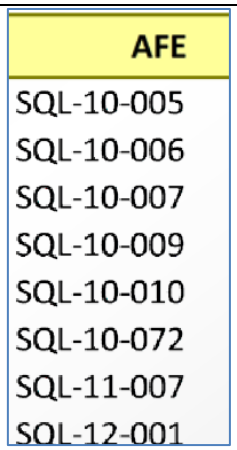
183 2012-2014 Colquiri Mine Three-year Plan, **C-108**, p. 119.

184 Reply on Quantum, ¶ 73; Eskdale III, ¶¶ 43-46; Lazcano III, ¶ 25. See Quadrant II, ¶ 51.

185 Annex 2 to Procedural Order No. 9 of 30 September 2019, Request 4, p. 24.

186 See Documents produced by Claimant for Request 4, **R-424**.

148. Two, contemporaneous documents show that any investment, even if it amounted to only thousands of dollars, had to be previously approved and registered by Sinchi Wayra through formal authorisations for expenditures ("AFEs"). AFEs are budgeting forms used during planning processes, which identify the estimated expenses of a project or asset. Sinchi Wayra's AFE nomenclature was based on (i) the Sinchi Wayra's group to which the project or asset belonged to (*e.g.*, "SQL" for Colquiri), (ii) its year of approval (*e.g.*, "10" for 2010), and (iii) its serial number (*e.g.*, "005"):[187]



Colquiri first quarter analysis, **C-326**, p. 39.

149. Once these AFEs were issued and budgeted for, a specific authorisation from Sinchi Wayra's directors was required if further expenses had to be made, even the most negligible ones.[188] This is demonstrated by the following two examples:

- On 26 April 2012, a Colquiri employee requested Sinchi Wayra's Vice-President of Finance and Systems the approval of funds for US$ 100,000, for which he had to fill in a special form:[189]

187 Colquiri first quarter analysis, **C-326**, p. 39.

188 [redacted].

189 Email from Sinchi Wayra (Mr Rodríguez) to Sinchi Wayra, **C-329** (Unofficial translation "*Lic. Carranza: I attach the Request of Funds Formulary for your approval, which are required to take care of urgent needs for the Mine project as detailed and as it is known by the Management of Project*").

From: Victor Vasquez
Sent: Thursday, April 26, 2012 9:42 AM
To: Mercedes Carranza
Cc: Eduardo Capriles; Fernando Ramos; Felipe Hartmann; Juan Pablo Arce; Eduardo Lazcano; Mario Rodriguez; Carla Mollo
Subject: RV: Colquiri Rampa RV: Presupuestos Tareas preliminares
Importance: High

Lic. Carranza:

Adjunto Formulario de Solicitud de Fondos para su aprobación, mismos que se requieren para atender requerimientos urgentes para el proyecto Mina según detalle y de conocimiento de la Gerencia de Proyecto.

Email from Sinchi Wayra (Mr Rodríguez) to Sinchi Wayra, **C-329**.

- Colquiri employees were required to seek approval for the purchase of computers and printers since August 2011.[190] This demonstrates how well-documented and stringent Sinchi Wayra's approval policies were by the time the Triennial Plan was allegedly approved:

Hemos visto un disparo en los gastos operativos por concepto de sistemas. Adicionalmente se ha visto compras exageradas de equipos de sistemas, o sea computadoras, impresoras, etc.

Por lo tanto el directorio ha decidido que **cualquier gasto o inversión vinculado a sistemas debería contar con el VISTO BUENO de la VICEPRESIDENTA DE FINANZAS Y SISTEMAS**. Después de contar con este visto bueno, haremos la aprobación y el pago de la misma forma como siempre.

Saludos cordiales,
Hilmar Rode

Sinchi Wayra S.A., Internal emails regarding approvals for IT expenses, 2011-2012, GB013895, **R-426**

150. If Claimant pretends that the Triennial Plan was approved, it is impossible that no documental approvals or AFEs exist in relation to its 2012 investments. On the contrary, the lack thereof just demonstrates, once again, that the Triennial Plan was never approved.

151. Three, Claimant pretends that because projects concerning the acquisition, construction and/or budgeting of assets were contemplated both in Sinchi Wayra's budgets and the Triennial Plan

[190] Sinchi Wayra S.A., Internal emails regarding approvals for IT expenses, 2011-2012, GB013895, **R-426**, p. 2 (Unofficial translation: "*We have seen operative expenses skyrocket in relation to software. In addition, exaggerated purchases of hardware, in other words computers, printers, etc. have been observed. Therefore, the directors have decided that any expense or investment related to software should HAVE A GREEN LIGHT by the VICEPRESIDENT OF FINANCE AND SYSTEMS. After green light, approval and payment will be granted the same way as usual*").

(*e.g.*, the Main Ramp), this would corroborate that the latter was approved and its implementation ongoing.[191] This is a *non sequitur*.

152. The fact that, for instance, certain projects included in Sinchi Wayra's 2012 budgets also appear in the Triennial Plan (*e.g.*, the Main Ramp) does not mean that the latter was real, had been approved and was being implemented. It only means that those specific projects were planning to be developed by Sinchi Wayra independently of the Triennial Plan. [redacted][192]

153. [redacted]

154. [redacted][195]

155. *Third*, the Triennial Plan was never implemented. In its Statement of Defence, Bolivia argued that Claimant provided no evidence demonstrating the implementation of the Triennial Plan.[196] Claimant tries to prove the opposite, to no avail.

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191 Reply on Quantum, ¶ 75.

192 [redacted] See also *Compañía Minera Colquiri* Investment Plan for 2012, **R-34**; March 2012 Investment Plan, April 4, 2012, **EO-07**; Sinchi Wayra S.A. Updated 2012 Investment Plan, April 2012, **R-427**.

193 Lazcano III, ¶ 22 (Unofficial transalation: "*the guidelines forseen for Colquiri's expansion plans*").

194 [redacted]

195 [redacted]

196 Statement of Defence, ¶¶ 630-634.

156. One, during the document production phase, Bolivia requested "*[d]ocuments and Communications prepared and/or reviewed by Colquiri and/or Sinchi Wayra and/or the Glencore Group that refer to the […] implementation of the Triennial Plan, including but not limited to: […] minutes of budget committee meetings; […] any accrued expenses arising out of the implementation of the Triennial Plan booked as OPEX and/or CAPEX; and social and/or environmental studies required for and/or related to the Triennial Plan's implementation […]*".[197] However, Claimant did not submit a single document in support of such implementation.[198]

157. Two, had the Triennial Plan started being implemented before the reversion of the Mine Lease, Compass Lexecon would have excluded these investments from its valuation. It does not. Compass Lexecon makes no adjustment in its model for CAPEX already completed and instead uses the full CAPEX values listed in the Triennial Plan.[199]

158. *Fourth*, the Triennial Plan is inconsistent with post-July 2011 documents prepared by Colquiri and Sinchi Wayra, which confirms that the Triennial Plan was never approved or implemented.[200] Six examples illustrate this:

159. One, [redacted][201] While the Triennial Plan forecasted yearly ore processing to reach 360,000 DMT in 2012,[202] Colquiri's 2012 Production Budget estimated an ore processing rate at Colquiri of 310,400 DMT.[203] Therefore, contrary to the Triennial Plan, the budget did not assume an increase in ore processing rates.

160. Mr Lazcano acknowledges the difference in production rates between the Triennial Plan and Colquiri's 2012 Production Budget, but attempts to justify such difference by arguing that Colquiri's 2012 Production Budget was a "*presupuesto interno*"[204] based on "*los volúmenes de extracción y procesamiento alcanzados hasta la fecha de elaboración de dicho*

197 Annex 2 to Procedural Order No. 9 of 30 September 2019, Request 4, p. 24.

198 Documents produced by Claimant for Request 4, **R-424**.

199 Compass Lexecon Updated Colquiri Valuation, **CLEX-40**, tab "CAPEX", cells N8-N29.

200 See Documents produced by Claimant for Request 4, **R-424**; Documents produced by Claimant for Request 13, **R-428**; Documents produced by Claimant for Request 15, **R-421**; Documents produced by Claimant for Request 20, **R-429**; Documents produced by Claimant for Request 21, **R-430**. See also SRK II, ¶ 24.

201 [redacted]

202 2012-2014 Colquiri Mine Three-year Plan, **C-108**, p. 36.

203 *Compañía Minera Colquiri* Annual Budget for 2012, **R-33**, tab "Planta", cells O24, O26.

204 Lazcano III, ¶ 29 (Unofficial translation: "*internal budget*").

presupuesto, es decir, en agosto de 2011"[205] and, therefore, "*no [estaba coordinado] con los proyectos de expansión del Plan Trienal que recién habían sido aprobados por los ejecutivos de Sinchi Wayra en La Paz en base al análisis de los consultores externos contratados a dichos efectos*"[206]. This is absurd for, at least, three reasons:

- Historical data is key to preparing long-term forecasts because it is concrete and real. The Triennial Plan contains forecasts of "*volúmenes de extracción y procesamiento*", so the historical data until July 2011 was obviously fundamental and should have been considered in its preparation (as it was for Colquiri's 2012 Production Budget);

- The same Sinchi Wayra's employees that were involved in the preparation of Colquiri's 2012 Production Budget should have been involved in any review and approval process for the Triennial Plan. [redacted];[207] and

- It is simply not true that Colquiri's 2012 Production Budget was a mere internal budget that could not have been "*[coordinado] con los proyectos de expansión del Plan Trienal.*"[208] Colquiri's 2012 Production Budget specifies the production forecasts for 2012, which is the same year investments would have started as per the Triennial Plan. Thus, by definition, both the Triennial Plan and Colquiri's 2012 Production Budget should have been coordinated.[209]

161. Two, in 2011 Sinchi Wayra prepared a document called "Plan de Inversiones 2012", which lists in detail Colquiri's planned investments for 2012 (the "**2012 Investment Plan**").[210] This document is also inconsistent with the Triennial Plan:

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205 Lazcano III, ¶ 29 (Unofficial translation: "*volúmenes de extracción y procesamiento alcanzados hasta la fecha de elaboración de dicho presupuesto, es decir, en agosto de 2011*").

206 Lazcano III, ¶ 29 (emphasis added) (Unofficial translation: "*not [coordinated] with the expansion projects of the Triennial Plan that had recently been approved by Sinchi Wayra executives in La Paz based on the analysis of the external consultants hired to that purpose*").

207 [redacted]

208 Lazcano III, ¶ 29 (Unofficial translation: "*[coordinated] with the expansion projects of the Triennial Plan*").

209 [redacted]

210 *Compañía Minera Colquiri* Investment Plan for 2012, **R-34**. [redacted]

- The Triennial Plan allegedly provided for US$ 43.7 million of expansion capital to be invested in the Colquiri Mine in 2012.[211] Far from that, the 2012 Investment Plan expected only US$ 7.8 million of expansion capital to be invested;[212] and

- The Triennial Plan's assumptions are inconsistent with comments included in the 2012 Investment Plan regarding "expansion investments".[213] The Triennial Plan forecasts annual ore processing rates of 360,000 DMT in 2012 and of 390,000 DMT in 2013. According to the 2012 Investment Plan, investments in the concentrator plant would have only allowed Colquiri to "*incrementar la capacidad de la planta concentradora de 1000 TMS [dry metric tonne] 1300 TMS en una primera fase*".[214]

[redacted]

162. Three, Sinchi Wayra's approved annual budget for 2012 ("**Sinchi Wayra's 2012 Budget**"), obtained by Bolivia during disclosure and approved in 2011,[216] is inconsistent with the Triennial Plan in, at least, three key parameters:

- The Triennial Plan forecasted ore processing rates of 360,000 DMT in 2012.[217] On the contrary, Sinchi Wayra's 2012 Budget estimated ore processing rates of just 297,118 DMT in 2012;[218]

- While the Triennial Plan contemplates investments amounting to US$ 54.3 million for 2012,[219] Sinchi Wayra's 2012 Budget considers capital expenditures of only US$ 10.4 million for that same year;[220] and

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211 2012-2014 Colquiri Mine Three-year Plan, **C-108**, p. 119.

212 *Compañía Minera Colquiri* Investment Plan for 2012, **R-34**, tab "Datos", rows 336, 339-340, 343-351.

213 *Compañía Minera Colquiri* Investment Plan for 2012, **R-34**, tab "Datos", column "AE".

214 *Compañía Minera Colquiri* Investment Plan for 2012, **R-34**, tab "Datos", cells AE343-AE351.

215 [redacted]

216 This document was produced by Claimant alongside the following sets of documents: Documents produced by Claimant for Request 15, **R-421**; Documents produced by Claimant for Request 20, **R-429**; Documents produced by Claimant for Request 21, **R-430**.

217 2012-2014 Colquiri Mine Three-year Plan, **C-108**, p. 36.

218 Sinchi Wayra S.A. 2012 Budget, GB014019, **R-431**, tab "Colquiri", cell O14.

219 2012-2014 Colquiri Mine Three-year Plan, **C-108**, p. 119; Compass Lexecon Updated Colquiri Valuation, **CLEX-40**, tab "CAPEX", cell N29.

220 Sinchi Wayra S.A. 2012 Budget, GB014019, **R-431**, tab "CAPEX", cell O150.

- The Triennial Plan assumes annual operating costs of US$ 20.8 million in 2012, with a unitary cost per tonne of US$ 57.9.[221] Sinchi Wayra's 2012 Budget, on the other hand, projects annual operating costs of US$ 18.7 million but with a higher unitary cost per tonne of US$ 63.2.[222] Had the Triennial Plan followed the budgeted unitary cost, its annual operating costs would have risen, all other things being equal, to US$ 22.7 million.

163. Four, in February 2012 Colquiri prepared a Capital Expenditure and Projects Statement. This document contains detailed information about Colquiri's investments for the year 2012. The approved CAPEX in this document is of US$ 10.4 million, the same as the approved CAPEX in Sinchi Wayra's 2012 Budget. Of these US$ 10.4 million, only US$ 5.4 million were assigned to expansion capital.[223] This expansion capital is almost 10 times lower than the expansion capital in the Triennial Plan.[224]

164. Five, in March 2012 (*i.e.*, 8 months after the Triennial Plan), Sinchi Wayra submitted to COMIBOL a new plan (the "**March 2012 Investment Plan**") which, in comparison to the Triennial Plan, contains (i) lower production levels (ore processing levels increase to a maximum of 470,000 tpy in 2016 instead of the 550,579 tpy in 2014 forecasted in the Triennial Plan) (ii) greater required CAPEX (US$ 12.3 million more in CAPEX compared to the Triennial Plan) and (ii) a longer ramp-up period (4 years instead of the 2 years anticipated in the Triennial Plan).[225] Had Claimant approved or implemented the Triennial Plan, the March 2012 Investment Plan should not have existed in the first place, let alone would have been sent by Sinchi Wayra to COMIBOL.

165. Six, an updated version of the 2012 Investment Plan, dated April 2012 and obtained by Bolivia in disclosure ("**Updated 2012 Investment Plan**"), is inconsistent with the Triennial Plan as well. Compared to the US$ 43.7 million in expansion capital in the Triennial Plan, the expansion capital of the Updated 2012 Investment Plan is only US$ 5.5 million.[226] In addition, while Claimant's valuation does not set forth any expansion CAPEX for 2013, the Updated

221 2012-2014 Colquiri Mine Three-year Plan, **C-108**, p. 109.

222 Sinchi Wayra S.A. 2012 Budget, GB014019, **R-431**, tab "Colquiri", rows 38 to 45.

223 Colquiri CAPEX and Projects Statement, February 2012, GB014123, **R-432**, tab "COLQUIRI", row 372.

224 2012-2014 Colquiri Mine Three-year Plan, **C-108**, p. 119 (US$ 43.7 million).

225 March 2012 Investment Plan, April 4, 2012, **EO-07**; Econ One, ¶¶ 48-52; Quadrant II, ¶ 22. See also Documents produced by Claimant for Request 5, **R-433**; Documents produced by Claimant for Request 6, **R-434**.

226 Sinchi Wayra S.A. Updated 2012 Investment Plan, April 2012, **R-427**, tab "PPT CAPEX", cell M8.

2012 Investment Plan shows that Sinchi Wayra budgeted US$ 4.7 million of expansion CAPEX for Colquiri in 2013.[227]

166. For the foregoing reasons, the Tribunal should dismiss Claimant's valuation as it relies on Triennial Plan, a mere piece of paper lacking any economic or technical supporting studies that was never approved nor implemented.

b) Claimant's valuation assumes that new reserves and resources will be magically delineated at the Mine

167. Bolivia demonstrated in its Statement of Defence that Claimant's valuation assumes (with no support whatsoever) that new resources and reserves will be *magically* delineated at the Mine to support a 20-year life of mine.[228] Despite this, Claimant insists in its unreasonable assumptions, confirming how speculative its valuation is.

168. *First*, by assuming that new resources and reserves will be *magically* delineated, Claimant is able to (i) include 6.5 million tonnes of additional mineable material in its valuation and (ii) artificially expand the Mine's life to 20 years.[229] However, these assumptions are not based on exploration and sampling but solely on RPA's "experience":

> *[The Colquiri Mine has] a high degree of success in discovering new Mineral Resources, and in converting Mineral Resources to Ore Reserves. […] Over the fourteen year period from 2005 to 2018, Ore Reserves were replaced annually and it is reasonable to assume that the system of "mine and replenish" would continue. […] Based on this, we have assumed a minimum 20-year mine life (i.e., 2012 to 2031) for the purposes of our review*.[230]

169. This is entirely speculative. Not only it is contrary to common sense to assume that the Colquiri Mine would maintain the same levels of reserves and resources forever (which underlies Claimant's argument), but industry standards expressly prohibit including hypothetical resources and reserves (*i.e.*, quantities of ore that have not even been included in the resources and reserves estimate) in a DCF valuation. The 2003 Standards and Guidelines for Valuation of Mineral Projects of the Special Committee on the Valuation on Mineral Projects ("**2003 CIMVal Standards**") provide that:

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227 Sinchi Wayra S.A. Updated 2012 Investment Plan, April 2012, **R-427**, tab "Datos", rows 337-352, columns O-Z.

228 Statement of Defence, ¶¶ 645-646.

229 Reply on Quantum, ¶ 86 ("*Colquiri's geological characteristics (large, continuous veins of minerals) and long track record of identifying new ore pursuant to the "mine and replenish" method made Sinchi Wayra confident that the Mine had more than sufficient amounts of ore to sustain the extraction levels projected in the Triennial Plan through the expiration of the Colquiri Lease in 2030.*"); RPA II, ¶ 41 ("*We [...] maintain that the 20-year Mine Plan could have been achieved and the total mineable resource of 10.7 Mt [...] is an appropiate basis for valuation purposes*").

230 RPA II, ¶¶ 31-34.

> ***It is not acceptable to use****, in the Income Approach [i.e. a DCF], "potential resources", "hypothetical resources" and other such categories that do not conform to the definitions of Mineral Reserves and Mineral Resources.*[231]

170. *Second*, Claimant's valuation assumes that 100% of the Mine's resources (including the aforementioned hypothetical resources and also *inferred* resources, which the Parties agree have the "*lowest [level of] confidence*" – *i.e.*, highest uncertainty – amongst all mineral resources)[232] will be mined. This is unreasonable and wrong.

171. The JORC Code (relied on by Colquiri to estimate its resources and reserves as of 2012, and also relied on by RPA for its analysis in this arbitration[233]) defines inferred resources as that "*[p]art of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve*."[234]

172. Due to their uncertain nature, the 2003 CIMVal Standards provide that inferred resources "***should not be used [in a valuation]*** *if the Inferred Mineral Resources account for all or are a dominant part of total Mineral Resources*".[235] Because, in 2012, inferred resources amounted to nearly 70% of Colquiri's estimated resources,[236] Claimant (i) should have excluded them from its valuation or, at the very least, (ii) should have discounted them for their high level of uncertainty.[237] Claimant did none. This, once again, confirms how speculative Claimant's valuation is.

c) The Colquiri Mine's bottlenecks as well as the water and energy limitations in the Colquiri area make it impossible to achieve Claimant's production forecasts

173. Claimant contends in its Reply on Quantum that, after completing its expansion plans, the Colquiri Mine would have duplicated its production rate "*from 289,888 tonnes of ore in 2011*

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231 CIMVal Standards and Guidelines for Valuation of Mineral Properties, February 2003, **RPA-73**, p. 25, G4.9 (emphasis added); The CIMVAL Code for the Valuation of Mineral Properties of 2019 (**R-435**) provides similarly, in Section 3.4.3, that "*[i]n the Income Approach, it is generally not acceptable to use in a Valuation any mineralization categories (such as potential quantity and grade, potential resource, exploration potential, exploration target, potential deposit, or target for further exploration) that do not conform to the definitions of Mineral Reserves and Mineral Resources*.").

232 RPA II, ¶ 49.

233 RPA II, ¶ 20 (b) (i).

234 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code) 2012 Edition, **R-255**, ¶ 21 (emphasis added).

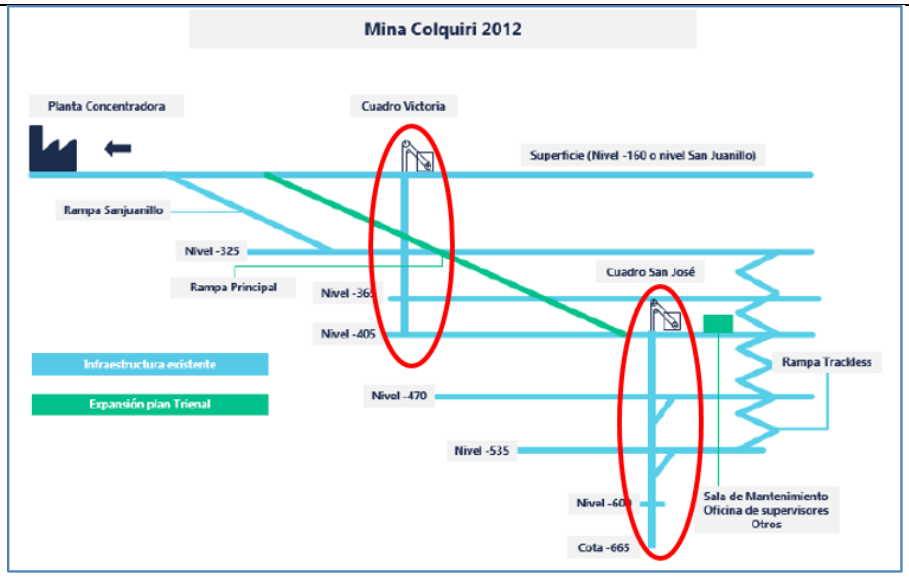
235 CIMVal Standards and Guidelines for Valuation of Mineral Properties, February 2003, **RPA-73**, ¶ G4.8 (emphasis added).

236 RPA II, p. 32, Table 1.

237 See Section 4.1.3 below.

to 550,579 tonnes of ore a year from 2014 through the end of the Colquiri Lease in 2030."[238] However, Claimant and its experts ignore the bottlenecks and practical limitations at the Mine that make Claimant's projected production factually impossible to achieve.

174. *First*, it is undisputed that, under Claimant's expansion plans, most of the additional mineralized material would come from levels below -405.[239] Any production from these levels would have to be transported to the surface first through the San José winze (which connects levels below -405 to level -405) and, thereafter, through the Victoria winze (which connects levels -405 to the surface), as shown by the graph below:[240]



Lazcano III, ¶ 31, p. 15.

175. Claimant ignores that the San José and Victoria winzes (circled in red in the graph) are bottlenecks that make it impossible to transport the 550,579 MT of mineralized material per year that its valuation assumes.[241] Indeed, as explained, in more detail, in Section 4.1.3 below:

- Due to its limited extraction capacity and fragile condition restraining its working hours, the San José winze has always been (and continues to be) an extraction bottleneck. [redacted]

238 Reply on Quantum, ¶ 61.

239 RPA II, ¶ 61.

240 Lazcano III, ¶ 31, p. 15.

241 Compass Lexecon Updated Colquiri Valuation, **CLEX-40**, tab "Revenues", cells P17-AF17.

[redacted][243]

[redacted]
[redacted]

- The Victoria winze constitutes another bottleneck inside the Mine. [redacted].[244] Sinchi Wayra's internal reports in 2009 already warned about these limitations:[245]

La mina se encuentra preparada para poder incrementar su producción, el problema principal por el cual no se puede lograr estas metas es por que la infraestructura del cuadro Victoria no lo permite, actualmente el cuadro se encuentra en su máxima capacidad distribuida en la extracción de mineral, caja, transporte de materiales y personal. La estructura de madera del cuadro se encuentra dañada por el tiempo de servicio. Se debe construir un Cuadro paralelo al Cuadro Victoria, que tenga mayor capacidad de extracción y poder garantizar el transporte de equipo pesado a niveles inferiores. Otra limitante es la baja disponibilidad de los equipos de mina (scoops y volquetas), se tiene paradas frecuentes por falta de repuestos y por falta en la capacidad de solucionar los problemas mecánicos, producto de la desvinculación del personal de supervisión capacitado y la falta de designación de un superintendente de mantenimiento. Se requiere contar con los servicios de terceros para realizar el mantenimiento de los equipos, logrando así las eficiencias requeridas.

242 [redacted].

243 [redacted].

244 [redacted].

245 Colquiri S.A. Mine Evaluation and Projections Report, September 2009-January 2010, GB006663 of 8 September 2009, **R-436**, p. 7 (emphasis added) (Unofficial translation: "*The mine is ready to increase its production, the main problem that hinders the accomplishment of these goals is that the infrastructure of the Victoria winze does not allow for it, it is currently at its maximum capacity distributed in the extraction of mineral, cage, transport of supplies and personnel. The wooden structure of the winze is damaged because of the service time. A winze parallel to the Victoria winze should be built, one who has a greater extraction capacity and that can ensure the transportation of heavy equipment to inferior levels*").

Colquiri S.A. Mine Evaluation and Projections Report, September 2009-January 2010, GB006663 of 8 September 2009, **R-436**, p. 7.

176. *Second*, the Main Ramp would not solve the problems posed by the Mine's bottlenecks. Indeed, given that the Main Ramp only connects level -405 to the surface, the capacity constraints to transport ore from levels below -405 to level -405 (through the San José winze) remain. This, in turn, limits the amount of ore that reaches the Plant, thus affecting its processing levels and making it impossible to achieve Claimant's production forecasts.[246]

177. *Third*, Claimant and its experts fail to consider the vast amounts of energy and water supply that would be needed to sustain production levels almost twice as high as the ones in 2011. This is the more so under Claimant's assumption that the Old Tailings Reprocessing Project would have been developed, as processing levels would increase to a staggering 5,000 tpd.[247]

[redacted]

[redacted][248]

178. [redacted]it is simply impossible to obtain sufficient water and energy in Colquiri to support Claimant's projected production. RPA did not visit the Mine site and ignores the real life problems faced by Colquiri to obtain water and energy.

d) The Old Tailings Reprocessing Project is another entirely speculative project with outdated studies that was never approved nor implemented

179. Claimant and its experts assume that the Old Tailings Reprocessing Project - which had been neglected for years - would have been implemented shortly after the reversion of the Mine.[249] This assumption is groundless.

246 See Section 4.1.3 below.

247 RPA II, ¶ 18.

248 [redacted] See Section 4.1.3 below.

249 Reply on Quantum, ¶ 61.

180. *First*, the long story of non-implementation of the project raises questions about its economic viability. As SRK noted since its first report, "*[t]he fact that this project, which was first evaluated in 1978, has still not been implemented some 40 years later, suggests that something is remiss.*"[250] Claimant values this project at US$ 99 million relying solely on an outdated feasibility study from 2004 prepared by Pincock, Allen and Holt (**8 years** before the reversion date), which had a number of reservations by both its authors and COMIBOL.[251] Claimant's sole reliance on this study is misplaced. As explained by SRK:

> *Feasibility studies are generally updated to make all inputs current. If we were to evaluate this project today, I would recommend a new drilling and sampling campaign using latest technology drilling and additional metallurgical testwork. Only after this could the economic viability be confirmed, and a development decision made.*[252]

181. *Second*, the Old Tailings Reprocessing Project is an unapproved project that, to be clear, exists only on paper. Neither the Triennial Plan nor the March 2012 Investment Plan mention the Old Tailings Reprocessing Project. Had Glencore approved or was planning to implement the Old Tailings Reprocessing Project, it would have been mentioned the project in these plans.

182. During the document production phase, Bolivia requested (and the Tribunal ordered) Claimant to produce "*[d]ocuments and [c]ommunications prepared and/or reviewed by Colquiri and/or Sinchi Wayra and/or the Glencore Group during the period 2004-2012 that refer to the assessment and/or feasibility of the Old Tailings Reprocessing Project […]*".[253] Claimant failed to produce any documents showing that it had taken steps to approve or implement the Old Tailings Reprocessing Project.[254] On the contrary, Claimant produced one contemporary document (the February 2012 Capital Expenditures and Projects Statement) which shows that capital expenses were neither budgeted nor approved for this project in 2010, 2011 or 2012, thus confirming that Claimant had not approved this project nor had any plans of implementing it:[255]

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250 SRK I, ¶ 95 (emphasis added). See also SRK II, ¶ 73 ("*[…] I repeat, the fact that this project, which was first evaluated in 1978, has still not been approved and/or implemented some 40 years later, suggests that something is remiss.*").

251 SRK II, ¶ 70 ("*A feasibility Study was completed in 2004 by Pincock Allen and Holt (PAH). PAH had a number of reservations including wide spaced drilling and sampling peripheral to the center of the tailings dam and lower tonnage due to the drilling not reaching bedrock. In 2004, the project was re-evaluated by Comibol who also had a number of reservations with the project including a substantially lower Zn grade of 3.74% compared with 4.21% in the RPA plan and lower metallurgical recoveries for both Zn and Sn.*").

252 SRK II, ¶ 87 (emphasis added).

253 Annex 2 to Procedural Order No. 9 of 30 September 2019, Request 25, pp. 129-130.

254 See Documents produced by Claimant for Request 12, **R-437**; Documents produced by Claimant for Request 24, **R-438**; Documents produced by Claimant for Request 25, **R-439**. See also SRK II, ¶ 88.

255 Colquiri CAPEX and Projects Statement, February 2012, GB014123, **R-432,** tab "GLOBAL", row 21.

	BUDGET			APPROVALS					
	Month	YTD	Full Year	Month			YTD		
				2010/2011	2012	Total	2010/2011	2012	Total
Engineering, Health & Safety	8.000	8.000	107.000	81.723	-	81.723	81.723	3.259	84.982
Environment	-	-	28.068	100.594	-	100.594	100.594	1.436	102.030
Exploration	-	-	280.683	631.750	-	631.750	631.750	-	631.750
Mine Development	142.957	403.494	3.926.872	485.699	-	485.699	485.699	1.172.340	1.658.039
Mining Equipment & Projects	55.784	55.784	1.436.574	684.518	-	684.518	684.518	-	684.518
Plant - Sustaining Capital	12.000	38.000	1.369.708	2.640.699	-	2.640.699	2.640.699	289.200	2.929.899
Plant - Expansion Capital	-	-	1.456.041	4.150.000	-	4.150.000	4.150.000	-	4.150.000
Services & Maintenance	296.108	591.108	1.476.067	1.379.197	9.700	1.388.897	1.379.197	344.700	1.723.897
IT	-	-	-	-	-	-	-	-	-
Housing/Administration	22.881	24.881	391.705	152.703	7.500	160.203	152.703	9.392	162.095
Others (Tailings Project)	-	-	-	-	-	-	-	-	-
TOTAL	**537.730**	**1.121.267**	**10.472.717**	**10.306.883**	**17.200**	**10.324.083**	**10.306.883**	**1.820.327**	**12.127.210**

Colquiri CAPEX and Projects Statement, February 2012, GB014123, **R-432**, tab "GLOBAL", row 21.

* * *

183. The documents produced (and not produced) by Claimant confirm Bolivia's case, inasmuch as (i) the Triennial Plan was nothing more than an unsupported piece of paper that Claimant never approved nor implemented; (ii) Claimant's assumptions and forecasts are inconsistent with Colquiri's historical performance, budgets and investment plans as of mid-2012; and, (iii) the Old Tailings Reprocessing Project is another entirely speculative project that was not even mentioned in, at least, the three years prior to the reversion date, let alone approved or implemented by Claimant.

184. For the foregoing reasons, the Tribunal should conclude that Claimant's valuation is based on mere (and abusive) speculation. Claimant has not proven having suffered damages that are certain and, as a consequence, cannot be compensated under international law.

2.3.2.2 Claimant's Valuation Of The Tin Smelter Is Premised On Mere Speculation

185. Claimant affirms to have suffered US$ 56 million (US$ 162.4 million with interest) in damages as a consequence of the reversion of the Tin Smelter to the State.[256] Yet, Claimant has failed to demonstrate that it sustained any damages at all resulting from the reversion of the Tin Smelter.

186. [redacted][257]

256 Compass Lexecon II, ¶ 145.

257 [redacted]

[redacted][258] [redacted]

[redacted][259] [redacted]

[redacted]

[redacted]

[redacted][260]

187. Claimant's US$ 56 million claim in this arbitration is an attempt to obtain a windfall [redacted] on the Tin Smelter on the basis of, at least, four speculative premises:

188. *First*, Claimant's unproven damages are based on speculative and unduly high tin ingot production forecasts. Claimant posits that the Tin Smelter's concentrate processing capacity would increase, according to RPA's estimates, from some 25,000 dry metric tonnes ("**DMT**") of tin concentrates processed per year to 30,000 DMT per year[261] "*without expanding the existing infrastructure.*"[262] On this basis, Claimant forecasts an increase in the Tin Smelter's production of tin ingots from some 11,400 tonnes per year in 2005 and 2006 to 14,000 tonnes of tin ingots per year starting in 2008,[263] *i.e.*, a 21.8% surge in the Tin Smelter's production of tin ingots. In so doing, Claimant deliberately confuses production of tin ingots (*i.e.*, the final result of the smelting process measured) with concentrate processing capacity (*i.e.*, the amount of tin concentrates fed into the furnaces along with additives for smelting), which, in itself, cannot ensure a certain level of production as that depends on the grade (*i.e.*, the purity or quality) of the concentrates and the metallurgical recovery rate.

189. Despite having acknowledged during its due diligence visit to Vinto in November 2004 that the Tin Smelter was "*a 'ghost' plant as more or less 70 % of the shops are closed or not operated any more […] a rather large plant but its operations are small ones,*"[264] Claimant now conveniently ignores the poor condition of the Tin Smelter and the ensuing limited production capacity at the time of reversion. In fact, Claimant has not even attempted to establish that the Smelter's remaining productive units as of the reversion in February 2007 could have been capable of producing 21.8% more tin ingots. They could not.

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258 [redacted]

259 [redacted]

260 [redacted]

261 RPA II, ¶ 217; Reply on Quantum, ¶ 123.

262 Reply on Quantum, ¶ 126.

263 Reply on Quantum, ¶ 123.

264 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310** p. 2.

190. Contemporaneous evidence demonstrates that 10 out of the 16 Tin Smelter's original furnaces had been decommissioned or dismantled as of the reversion date and that, of the 6 remaining furnaces, only 3 were actual ingot producing units.[265] Claimant has not even addressed this evidence in its submissions. Instead, Claimant simply asserts that "*optimization processes*" would have "*boost[ed] output by enabling Vinto to operate the three smelting furnaces more efficiently, with less down time*."[266] In spite of bearing the burden to prove that such processes would result in the 21.8% increase in production forecasted by RPA,[267] Claimant has failed to establish how they would have increased production (much less by 21.8%). To the contrary, Eng Villavicencio (whose team developed those optimization processes) explains that they only served to mitigate production losses (which is not the same thing as increasing production) and to improve safety and environmental conditions.

191. The speculative nature of Claimant's allegations regarding the Tin Smelter's production levels is confirmed by the Smelter's historical (*ex ante*) performance, as shown in the table below:

265 List of the main production units in service and out of service from January 2006 to the end of January 2007, **R-68**; Villavicencio I, ¶ 47; Graphs of the main production units in service and out of service from January 2006 to the end of January 2007, **R-69**.

266 Reply on Quantum, ¶ 128.

267 RPA II, ¶ 234.

	Year	Production (tonnes of ingots)	Year to year variation
Allied Deals / RBG Resources[268]	2000	10,673	-
	2001	9,843	-7.77%
Comsur[269]	2002	10,345	+5.1%
	2003	11,317	+9.39%
	2004	11,361	+0.38%
Glencore[270]	2005	11,401	+0.35%
	2006	11,403	+0.02%
Glencore's projections[271]	2007	12,810	+12.33%
	2008	13,974	+9.08%

192. In fact, since its privatization in 2000, the production of tin ingots remained between 10,345-11,400 tonnes of ingots per year (including in the years operated by Comsur and by Claimant).[272]

193. Although Claimant self-servingly claims that a 21.8% increase in production starting in 2008 could be possible "*without expanding the existing infrastructure*,"[273] it never managed to increase the Tin Smelter's production when it operated the asset. Why? Simply because the Smelter's outdated furnaces were already operating at maximum capacity. As explained by Eng Villavicencio:

> *el Balance Metalúrgico de mayo de 2006 (el último mes que estuve en la Fundidora) muestra que Sinchi Wayra alimentó 1.596 TMF de concentrados de estaño de muy alta ley (50,526%) […] Considerando la ley de los concentrados y el porcentaje de recuperación reportado ese mes por Sinchi Wayra (95,48%), la producción de mayo*

268 Empresa Metalúrgica Vinto Production History 1995-2019, **R-401**.

269 Empresa Metalúrgica Vinto Production History 1995-2019, **R-401**.

270 Empresa Metalúrgica Vinto Production History 1995-2019, **R-401**.

271 2020 RPA Model, January, 2020, **RPA-55 Bis**.

272 See Section 4.2.4.1 below; Statement of Defence, ¶ 855; Villavicencio I, ¶ 42; Production history of the Empresa Metalúrgica Vinto 1995-2017, **R-78**.

273 Reply on Quantum, ¶ 126.

> *de 2006 debió haber sido de 1.400 TMF. Sin embargo, la producción que alcanzamos ese mes fue de tan solo 1.157 TMF; quedando 366 TMF en el circuito. ¿Por qué no llegamos a producir más? Pues porque los equipos no daban para más.*
>
> *Nada de esto cambió en los meses siguientes hasta febrero de 2007, como pude comprobar con la documentación de la época y al regresar en 2009 a la EMV. Por ejemplo, en diciembre de 2006 (último año completo en el que Sinchi Wayra operó la Fundidora de Vinto), vemos en el Balance Metalúrgico de diciembre de 2006 que, pese a haber adquirido 12.442 TMF de concentrados con 47,9% Sn de ley ese año y reportar una recuperación de 95,49%, la producción se mantuvo en 11.400 TMF anuales (quedando nuevamente material dentro del circuito).*[274]

194. *Second*, Claimant also conveniently fails to consider the lack of sufficient high-grade concentrates in the market to achieve the staggering increase in production it claims and how, even in the years it was still operating the Colquiri Mine (between 2007 and 2012), the concentrates produced by the Mine were neither of sufficient quantity nor quality to maintain production at the Tin Smelter (as further discussed below). Claimant simply assumes that the average grade of the tin concentrates would remain constant at a high-grade of 48.75% Sn[275] through 2026.[276]

195. Claimant fails to establish, however, where such high-grade concentrates would be sourced from. Indeed, Claimant's premise is inconsistent with the historical downward trend in the grades of tin concentrates produced in Bolivia:[277]

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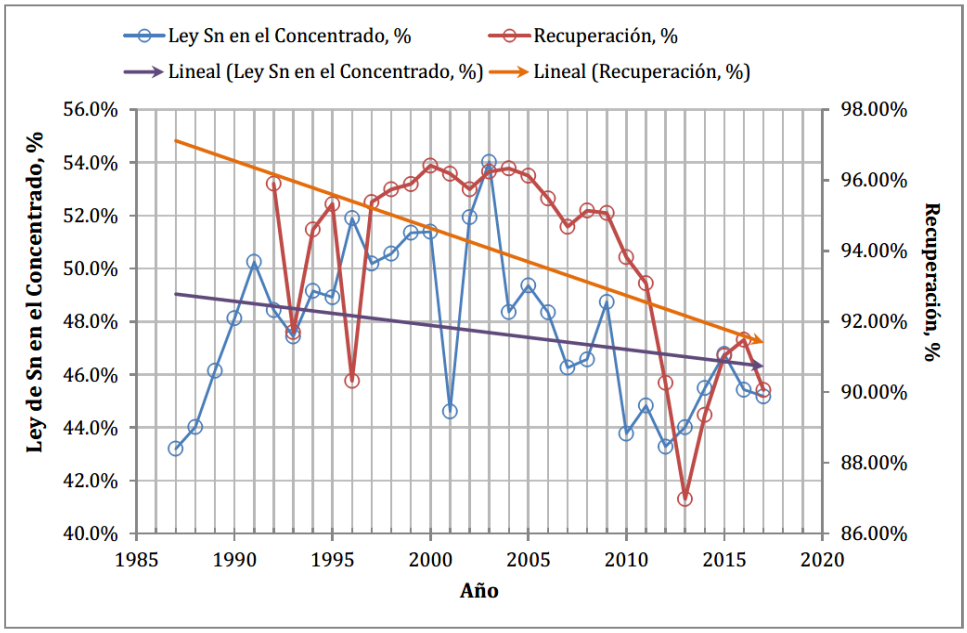
274 Villavicencio III, ¶¶ 47-49 (Unofficial translation: "*the May 2006 Metallurgical Balance (the last month I was at the Smelter) shows that Sinchi Wayra fed 1,596 MTF of very high grade tin concentrates (50.526%) [...] Considering the grade of the concentrates and the recovery rate reported that month by Sinchi Wayra (95.48%), the production in May 2006 should have been 1,400 MT. However, the production we reached that month was only 1,157 MT; leaving 366 MT in the pipeline. Why didn't we produce more? Because the units were maxed out. None of this changed in the following months until February 2007, as I was able to verify with the documentation of that time and when I returned to EMV in 2009. For example, in December 2006 (the last full year in which Sinchi Wayra operated the Vinto Smelter), we see in the Metallurgical Balance Sheet of December 2006 that, in spite of having acquired 12,442 MT of concentrates with 47.9% Sn grade that year and reporting a recovery of 95.49%, production remained at 11,400 MT per year (once again leaving material within the pipeline).*").

275 RPA II, ¶ 199. See also Section 4.2.4.2 below.

276 RPA II, ¶¶ 192-193.

277 Statement of Defence, ¶ 862; Villavicencio I, ¶ 63.



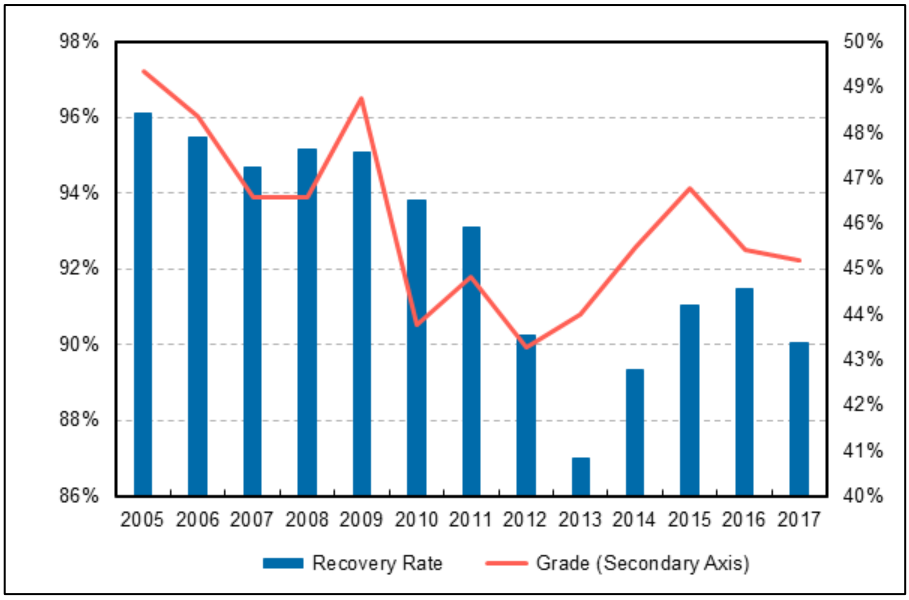
196. As Bolivia already demonstrated in its Statement of Defence, since 1987 to date, the average grade of concentrates purchased by the Tin Smelter has been steadily declining from 50.23% in 1990 to 48.74% around 2009 and 46.77% in 2015.

197. *Third*, Claimant also speculates that the metallurgical recovery rate (*i.e.*, the amount of tin that will be extracted from the concentrates in the smelting process) would remain constant at incredible 95.6% through 2026.[278] Once again, Claimant fails to prove this allegation.

198. Claimant's naked assumption ignores that the metallurgical recovery rate declines as the average grade of the concentrates decreases.[279] As illustrated by the chart below based on Figure 10 of RPA's Second Expert Report, but incorporating the historical concentrate grades (which RPA conveniently neglected to include), whenever the grade of concentrates decreases so does the metallurgical recovery:

[278] RPA II, ¶¶ 192-193. See also Section 4.2.4.3 below.

[279] Statement of Defence, ¶ 651.



199. *Fourth*, Claimant's unproven and unrealistic damages also result from unduly high tin ingot price forecasts.[280] Claimant's expert Compass Lexecon estimates a price premium of 3% for every tin ingot sales contract on the basis of a single contract executed with a Brazilian company,[281] when Claimant's own 2004 due diligence on the Tin Smelter acknowledged that "*only the Brasil [sic] sales have a 3% on LME price premium*."[282]

200. Claimant has, therefore, not established that it suffered *any* harm as a consequence of the Tin Smelter's reversion to the State and any damages awarded by this Tribunal would lead to its unjust enrichment.

2.3.2.3 Claimant's Valuation Ignores That The Antimony Smelter Was A Liability, Not An Asset

201. Claimant seeks an astounding US$ 1.9 million for the Antimony Smelter.[283] Despite bearing the burden to establish that it suffered damages that are certain, Claimant has not even attempted to address how the reversion of an obsolete and extensively contaminated plant (per Claimant's own account[284]) that has been inoperative since the 90s and which Claimant used as a mere storage facility could have caused it any damage.

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280 See Section 4.2.4.4 below.

281 Compass Lexecon II, ¶ 68; Reply on Quantum, ¶ 140; Vinto SA-Soft Metals Ltda - Purchase Contract 03 - 20.02.06, **CLEX-32**.

282 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**, p. 7.

283 Reply on Quantum, Section III.B.2.

284 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**, pp. 2, 6.

202. Given that the Antimony Smelter is a liability, Claimant has not suffered any damage and its claim is far removed from reality and speculative at best for, at least, two reasons:

203. *First*, Claimant posits that the Antimony Smelter's Land (87,496.40 m^2 of land earmarked for industrial use only in the outskirts of Oruro) would have appreciated since the reversion (in an attempt to justify its *ex post* valuation),[285] without providing any evidence. Ms Russo – Claimant's real estate expert – simply states that "*sobre la base de mi experiencia y discusiones que he mantenido con distintos peritos valuadores de inmuebles en la zona de la Fundición de Antimonio se han apreciado en valor desde el año 2010 a la fecha*".[286] Ms Russo, however, does not submit any evidence of what the Land's value would have been in 2010 or even the slightest indication of what the rate of appreciation would have been for industrial land with similar characteristics.

204. In any event, as Bolivia demonstrates, the Land could not have appreciated as it is earmarked for industrial use in an area where the development of new industrial activity is (i) opposed by residents;[287] and (ii) prohibited by regulation.[288]

205. *Second*, Claimant could not have suffered any damages since the Antimony Smelter is a liability.

206. The Antimony Smelter was (and still is) a non-operating asset with, according to Claimant's own description, a "*significant soil pollution which affect a large cercle around the plant, the soil pollution is significative till 1 km from the roaster plant and is noticeable till 2.5 km [sic]. […]Another noticeable pollution issue is the remediation of 3 ponds of which represent somme 10 000 m2 [sic].*"[289] Indeed, Ms Russo herself acknowledges after visiting the Land that "*advertí la presencia de lo que parecía ser escoria y una piscina con un depósito liquido en ella*".[290] Claimant, however, ignores the real condition of the Land and the remediation and clean-up costs that it requires, which would be higher than the price of the Land itself.[291]

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285 Russo II, ¶ 2.1.

286 Russo I, ¶ 1.5 (Unofficial translation: "*based on my experience and on discussions I have had with different real-estate valuation experts in the area of the Antimony Smelter have appreciated in value from the year 2010 to date*.").

287 See Section 4.3.1 below.

288 See Section 4.3.1 below. Oruro Municipal Decree No. 058 of 31 October 2016, **R-440**, Article 1; Law No. 535 of Mining and Metallurgy of 28 May 2014, **R-441**, Art. 93.

289 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**, pp. 6-7. See also Statement of Defence, ¶668; Villavicencio I, ¶ 92.

290 Russo II, ¶ 3.4.8 (emphasis added).

291 Reply on Quantum, ¶ 170 ("*Mr Mirones is wrong to assert that any existing pollution in the land on which the Antimony Smelter is located reduces the land's value.*").

207. Moreover, given that the buildings are abandoned and in a state of ruins (a fact that Ms Russo does not deny following her visit to the site in August 2019), Claimant should have considered, as Architect Mirones does, that they would have to be demolished and dismantled.[292] Had Claimant done so, it would have concluded, as Architect Mirones did, that the costs of dismantling would be higher than the residual value of the ruinous buildings,[293] thus making the Antimony Smelter a liability.

208. Unable to establish that it suffered any damages due to the reversion of the abandoned, deteriorated and significantly polluted Antimony Smelter, Claimant resorts to comparisons with plots of land that are not industrial in an attempt to bolster damages claim. As Bolivia demonstrates, Claimant's valuation is methodologically flawed and speculative as it ignores the real condition of the Antimony Smelter.

3. EVEN IF CLAIMANT'S SOUGHT DAMAGES WERE CERTAIN (*QUOD NON*), THEY RESULTED FROM CLAIMANT'S OWN ACTS, NOT BOLIVIA'S

209. Even if Claimant could prove that the damages sought were sufficiently certain (*quod non*), no damages should be awarded, or, at the very least, any damages awarded should be significantly reduced, because the reversion of Claimant's Assets was the result of Claimant's own conduct. The State had to act.

210. Claimant's approach to causation and contributory fault is wrong, as it fails to account for the fact that Claimant's own conduct provoked the State's response (**Section 3.1**). A proper application of causation and contributory fault principles should thus lead to the outright exclusion or, at least, the significant reduction of Claimant's damages (**Section 3.2**).

3.1 Claimant's Approach To Causation And Contributory Fault Is Unfit For Cases Where The Investor's Conduct Caused The State's Reaction

211. Claimant's approach to causation and contributory fault is unfit for this case, as it ignores the impact of Claimant's own conduct in the chain of events leading up to the harm for which compensation is sought.

212. This is not a case in which the investor was passive or where its conduct was only part of the context in the chain of causation. This is a case where the investor's conduct provoked the

[292] Mirones II, Section 6.2.

[293] Mirones II, ¶¶ 124, 127.

very acts of the State that are allegedly unlawful – a case where interrelated and cumulative causes lead to each head of damages.[294]

213. When the investor's conduct and the State's response thereto are the cumulative causes of damage, said investor conduct is relevant in assessing both causation and contributory fault. Causation and contributory fault are interrelated concepts,[295] and international tribunals have often adopted an integrated approach in addressing them. As put by the *Copper Mesa* tribunal, "*the general approach taken in all these decisions, whether treated as causation, contributory fault (based on wilful or negligent act or omission) or unclean hands, is materially the same.*"[296]

214. Under this integrated approach, tribunals have considered whether the causal chain leading to the harm suffered by the investor can be traced back to the investor's conduct, which triggered the State's response.[297] Depending on the conduct's intensity, as the *Burlington* tribunal held, "*a claimant's conduct may justify an exclusion or reduction of damages if it has contributed to the injury*."[298]

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294 *Yukos Universal Limited (Isle of Man) v Russian Federation* (PCA Case No AA 227) Final Award of 18 July 2014, **CLA-122**, ¶ 1605 (citing to *Antoine Goetz & Consorts et S.A. Affinage des Metaux v. République du Burundi*, ICSID, ARB/01/2, Award of 21 June 2012, **RLA-208** and *Occidental Petroleum Corporation and Occidental Exploration and Production Company v Republic of Ecuador* (ICSID Case No ARB/06/11) Award, **CLA-254**); A. Moutier-Lopet, "Contribution to the Injury", in J. Crawford, A. Pellet, S. Olleson, *The Law of International Responsibility*, 2010 (extract) of 1 January 2010, **RLA-123**, p. 643 ("*In the case of the intervention of a cumulative cause, it is the convergence of the unlawful act and the conduct of the victim (neither of which could have caused the injury by itself) that produces the injury.*").

295 S. Ripinsky and K. Williams, Damages in International Investment Law (British Institute of International and Comparative Law, 2008), **RLA-113(bis)**, p. 314 ("*the concept of contributory fault fits within the discussion on 'causation' and in particular on 'concurrent causes', as a circumstance reducing the amount of compensation*").

296 *Copper Mesa Mining Corporation v Republic of Ecuador* (PCA Case No 2012-2) Award of 15 March 2016, **CLA-221**, ¶ 6.97.

297 *Occidental Petroleum Corporation and Occidental Exploration and Production Company v Republic of Ecuador* (ICSID Case No ARB/06/11) Award, **CLA-254**, ¶ 669 ("*The Tribunal must therefore decide, on the basis of the totality of the evidence before it, whether there is a causal link between the negligent failure of [claimant] […] and the declaration of caducidad by the Respondent […] and, through the latter, with the damages resulting from caducidad*.") (emphasis added); *Yukos Universal Limited (Isle of Man) v Russian Federation* (PCA Case No AA 227) Final Award of 18 July 2014, **CLA-122**, ¶ 1615 ("*it cannot ignore that Yukos' tax avoidance arrangements in some of the low-tax regions made it possible for Respondent to invoke and rely on that conduct as a justification of its actions against Mr. Khodorkovsky and Yukos. […] the Tribunal concludes that there is a sufficient causal link between Yukos' abuse of the system in some of the low-tax regions and its demise which triggers a finding of contributory fault on the part of Yukos*") (emphasis added).

298 *Burlington Resources, Inc v Republic of Ecuador* (ICSID Case No ARB/08/5) Decision on Reconsideration and Award of 7 February 2017, **CLA-134**, ¶ 572. See also *Occidental Petroleum Corporation and Occidental Exploration and Production Company v Republic of Ecuador* (ICSID Case No ARB/06/11) Award, **CLA-254**, ¶¶ 665-669; *Gemplus SA and others v United Mexican States, and Talsud SA v United Mexican States* (ICSID Case Nos ARB(AF)/04/3 and ARB(AF)/04/4) Award of 16 June 2010, **CLA-98**, ¶ 11.12 ("*Article 39 of the ILC's Articles on State Responsibility precludes full or any recovery, where, through the wilful or negligent act or omission of the claimant state or person, that state or person has contributed to the injury for which reparation is sought from the respondent state. […] The common feature of all these national legal concepts is, of course, a fault by the claimant which has caused or contributed to the injury which is the subject-matter of the claim*") (emphasis added); *Copper Mesa Mining Corporation v Republic of Ecuador* (PCA Case No 2012-2) Award of 15 March 2016, **CLA-221**, ¶ 6.97; *Yukos Universal Limited (Isle of Man) v Russian Federation* (PCA Case No AA 227) Final Award of 18 July 2014, **CLA-122**, ¶¶ 1596-1599; I. Marboe, *Calculation of Compensation and Damages in International Investment Law*, Oxford University Press, 2nd ed. 2017,

215. In practical terms, this approach makes Claimant's conduct relevant for assessing compensation in two alternative ways. First, if Claimant's conduct is considered the dominant cause triggering Bolivia's allegedly unlawful response, then this "*fatally severs the chain of causation*,"[299] excluding any compensation altogether. Alternatively, even if the causal chain is not severed, Claimant's provocation of Bolivia's response will still be considered to reduce any compensation, by an amount proportionate to Claimant's contribution to its own harm.

216. Claimant does not dispute that an investor's conduct can either eliminate or reduce compensation.[300] However, Claimant seeks to avoid the impact of own its conduct, both in its analysis of causation, and in that of contributory fault. Claimant is mistaken on both counts.

3.1.1 Claimant's Approach To Causation Is Wrong

217. In its Reply, Claimant wrongly characterises Bolivia's position on causation, and attempts to sidestep how its prior conduct intervened in the chain of causation leading to the alleged breach by the State. Claimant's position is wrong, for at least five reasons.

218. *First*, Claimant posits that "*Bolivia does not deny that its Treaty breaches were the proximate cause of Glencore Bermuda's losses with respect to three of the four Investments*" (*i.e.*, the Antimony Smelter, the Tin Smelter and the Tin Stock – the fourth Investment being Colquiri).[301]

219. This is not true. Bolivia never conceded causation for any of the Assets – nor could it accept Claimant's position through silence, since Claimant has not put forth even a *prima facie* case on causation for the Antimony Smelter, the Tin Smelter or the Tin Stock.

220. While Claimant acknowledges that it bears the burden of proving causation,[302] it has failed to do so for every alleged breach. As the *Perenco* tribunal recently confirmed, "*in the absence of a creeping or indirect expropriation effected by a series of discrete measures, the orthodox*

RLA-124(bis), p. 121 ("*[i]f the injured party has acted negligently and thereby contributed to the occurrence of damage, the obligation to pay damages can be reduced, or even offset.*").

299 *Ioan Micula and others v Romania* (ICSID Case No ARB/05/20) Award of 11 December 2013, **CLA-119**, ¶ 1154.

300 Reply on Quantum, ¶¶ 196-199.

301 Reply on Quantum, ¶ 28.

302 Reply on Quantum, ¶ 24 ("*Glencore Bermuda accepts that it bears the burden of proving the damage that it has suffered as a result of Bolivia's wrongful conduct*").

approach is for a claimant to identify the damages caused by each breach at the time of its occurrence."[303]

221. Despite its burden, Claimant's entire causation analysis is incomplete. Claimant has not advanced a creeping expropriation claim for any of the Assets. Yet, Claimant has never identified – let alone established – which specific portion of the damages it seeks would have been caused by the distinct actions of Bolivia that form the basis of its FPS claim regarding Colquiri, or of its alternative FET claims regarding all three reverted Assets.

222. Instead, Claimant only addressed causation for the first time in its Reply on Quantum, and only in relation to the alleged expropriation of the Colquiri Mine Lease.[304] The rest of Claimants submission on Quantum only hints to the losses allegedly suffered by Glencore Bermuda, again, only due to the alleged expropriation of the three Assets,[305] and only requests compensation for the Assets' full loss, without specifying what part was allegedly caused by Bolivia's supposed FET or FPS breaches.

223. In short, if the Tribunal rejects Claimant's expropriation claims on the merits (as it should), there is no causation analysis put forth by Claimant in support of its FET or FPS claims. Claimant cannot treat causation as self-evident, or presume any admissions by Bolivia for any of its Treaty claims or the other three Assets in dispute, especially since it has still not put forth a *prima facie* case on causation for any of them. It is Claimant's burden to prove causation between each alleged Treaty breach and each head of damage sought,[306] and not for Bolivia to pre-emptively deny or rebut this.

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303 *Perenco Ecuador Limited v. The Republic of Ecuador*, ICSID Case No. ARB/08/6, Award of 27 September 2019, **RLA-204**, ¶ 74 ("*The Tribunal recalls that it is well-established that in the absence of a creeping or indirect expropriation effected by a series of discrete measures, the orthodox approach is for a claimant to identify the damages caused by each breach at the time of its occurrence. It is moreover the case that the focus of the inquiry must be on damages proximately caused by the breaches found by the Tribunal*.") (emphasis added). See also *SD Myers Inc v Government of Canada* (UNCITRAL) Second Partial Award of 21 October 2002, **CLA-39**, ¶ 173; *Archer Daniels Midland Company and Tate & Lyle Ingredients Americas, Inc. v. The United Mexican States*, ICSID Case No. ARB(AF)/04/05, Award of 21 November 2007, **RLA-114**, ¶ 285; *Gemplus SA and others v United Mexican States, and Talsud SA v United Mexican States* (ICSID Case Nos ARB(AF)/04/3 and ARB(AF)/04/4) Award of 16 June 2010, **CLA-98**, ¶¶ 12-56.

304 Reply on Quantum, ¶¶ 29-30 ("*To establish proximate cause, Glencore Bermuda need only show that its loss of Colquiri was the objectively foreseeable outcome of Bolivia's expropriation of the Colquiri Lease. […] the complete loss of Claimant's investment is the objectively foreseeable result of the complete taking of the investment by the State. […] In this case, Bolivia's taking of Colquiri in its entirety was the sole cause of Glencore Bermuda's losses in relation to Colquiri*.") (emphasis added).

305 See, indicatively, Reply on Quantum, ¶ 34 ("*Before they were taken from Glencore Bermuda, the Investments operated as complementary businesses*"), ¶ 35 ("*Before their expropriation by Bolivia […]*"), ¶ 41 ("*When Bolivia seized Vinto on 9 February 2007*").

306 Reply on Quantum, ¶ 24 ("*Glencore Bermuda accepts that it bears the burden of proving the damage that it has suffered as a result of Bolivia's wrongful conduct*.") (emphasis added). See also *Perenco Ecuador Limited v. The Republic of Ecuador*, ICSID Case No. ARB/08/6, Award of 27 September 2019, **RLA-204**, ¶ 76; *Anatolie Stati, Gabriel Stati, Ascom Group S.A. and Terra Raf Trans Traiding Ltd v. The Republic of Kazakhstan*, SCC Case No. V116/2010, Award of 19 December 2013, **RLA-96**, ¶ 1330 ("*The Parties agree, and so does the Tribunal, that, as reflected in Art. 36 and 39 ILC Articles on State Responsibility, Claimants bear the burden of demonstrating that the claimed quantum of*

224. *Second*, Claimant's position on causation regarding the alleged expropriation of Colquiri is equally flawed. Claimant asserts that, "*[t]o establish proximate cause, Glencore Bermuda need (sic) only show that its loss of Colquiri was the objectively foreseeable outcome of Bolivia's expropriation of the Colquiri Lease*," adding that "*there is no question*" that this criterion is met in this case.[307]

225. However, Claimant construes the legal qualifications of proximity and foreseeability too restrictively, hoping to sidestep the impact of its prior conduct on the overall causal chain. However, it is well established that the legal qualifications of causal proximity and foreseeability must not be construed too literally, because they were meant to prevent recovery when mandated by "*some reason of policy or justice.*"[308] As explained by Ripinsky,

> *[t]he central point to be emphasized is that the legal tests of causation are used to limit the amount of legally relevant, and thus recoverable, damages to the extent that it would be just and consonant with legal policy. As clearly described by Professor Honoré in his seminal work on comparative tort law:*
>
> *[A]n aggrieved party who has suffered harm which in law amounts to injury may fail to recover compensation for it either because the alleged tortfeasor did not cause it or because, though he did, some reason of policy or justice prevents recovery. In either of these cases the damage is said in Common Law systems to be 'too remote' or 'not proximate'. These expressions are not taken literally. They do not refer to what is far or near in space or time. They are simply shorthand used to denote all those considerations, causal or other, which may make the connection between the tortfeasor and the damage legally insufficient.*[309]

226. In the present case, where Claimant's prior conduct and Bolivia's response thereto are the cumulative causes leading to each head of damages, the causal analysis cannot only post-date the alleged breach. The chain of causation must be traced back to include Claimant's prior conduct which, as a matter of "*antériorité causale*,"[310] triggered Bolivia's response and thus, also the damages allegedly resulting therefrom.[311] In other words, the predominant cause of

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compensation is caused by the host State's conduct.") (emphasis added); *Ioannis Kardassopoulos and Ron Fuchs v Republic of Georgia* (ICSID Case Nos ARB/05/18 and ARB/07/15) Award of 3 March 2010, **CLA-96**, ¶ 453.

307 Reply on Quantum, ¶ 29.

308 S. Ripinsky and K. Williams, Damages in International Investment Law (British Institute of International and Comparative Law, 2008), **RLA-113(bis)**, p. 136.

309 S. Ripinsky and K. Williams, Damages in International Investment Law (British Institute of International and Comparative Law, 2008), **RLA-113(bis)**, pp. 135-136 (emphasis added), quoting AM Honore, "Causation and Remoteness of Damage" in A. Tunc, *International Encyclopedia of Comparative Law* (Tiibingen, 1983) Vol XI, p. 16.

310 B. Bollecker-Stern, "Le Préjudice dans la Théorie de la Responsabilité Internationale", *Publications de la Revue Générale de Droit International Public*, No. 22, 1973 (extract), **RLA-127(bis)**, p. 317 ("*[Au] cas où l'acte de l'Etat apparaît comme provoqué par un acte antérieur de la victime […] [, il] s'agit […] d'une antériorité causale plutôt que purement temporelle*").

311 *Occidental Petroleum Corporation and Occidental Exploration and Production Company v Republic of Ecuador* (ICSID Case No ARB/06/11) Award, **CLA-254**, ¶ 669 ("T*he Tribunal must therefore decide, on the basis of the totality of the evidence before it, whether there is a causal link between the negligent failure of [claimant] […] and the declaration of caducidad by the Respondent […] and, through the latter, with the damages resulting from caducidad*.")

the losses must be identified within a sufficiently complete causal chain, containing both prior and posterior causes, which were known or objectively foreseeable at the time of the breach.

227. *Third*, Claimant's authorities are either inapposite, or support Bolivia's position. Claimant is also wrong to criticize the authorities in Bolivia's previous submission.[312]

228. One, Claimant relies on the *Lemire, Kardassopoulos, Houben* and *Burlington* decisions in support of its approach to causation.[313] However, the first three awards are simply inapposite to this case, while the *Burlington* case supports Bolivia's position.

229. On the one hand, based on the *Lemire*, *Kardassopoulos*, and *Houben* cases, Claimant asserts that, in cases of expropriation, there can be "*no question*" over the existence of a causal link between breach and injury.[314] However, none of these tribunals dealt with a case where the investor's conduct had caused the State's response and the ensuing losses.[315] While such a presumption of causation may work for cases where no cumulative causes attributable to the investor surround a State's injurious act, it is clearly non-transposable to this case.

230. On the other hand, even though the *Burlington* tribunal dealt with a case where the investor's conduct had provoked the State's response, Claimant's selective reliance thereon is misplaced. Claimant does not cite to the tribunal's analysis of causation, but instead, to a part of the decision addressing if the use of *ex post* data for calculating damages is compatible with the

(emphasis added); *Yukos Universal Limited (Isle of Man) v Russian Federation* (PCA Case No AA 227) Final Award of 18 July 2014, **CLA-122**, ¶¶ 1614-1615 ("*it cannot ignore that Yukos' tax avoidance arrangements in some of the low-tax regions made it possible for Respondent to invoke and rely on that conduct as a justification of its actions against Mr. Khodorkovsky and Yukos. […] the Tribunal concludes that there is a sufficient causal link between Yukos' abuse of the system in some of the low-tax regions and its demise which triggers a finding of contributory fault on the part of Yukos*") (emphasis added).

312 Reply on Quantum, ¶ 30; Statement of Defence, ¶¶ 678-681.

313 Reply on Quantum, ¶ 29 and footnotes 33, 35.

314 Reply on Quantum, ¶ 29 and footnotes 33, 35.

315 The *Lemire* tribunal dealt with a tender process for awarding radio frequencies, which was carried out in an irregular, arbitrary and discriminatory manner, breaching FET. The investor's conduct was not a consideration for the *Lemire* tribunal's findings, which in the context of causation only addressed how the participation of third parties in the tender could have affected the causal chain leading to damages, see *Joseph Charles Lemire v Ukraine* (ICSID Case No ARB/06/18) Award of 28 March 2011, **CLA-104**, ¶¶ 59-64, 168-172. The *Kardassopoulos* tribunal addressed an expropriation which was pre-decided and even planned in advance of the asset's eventual taking, and which was not triggered by any conduct of the investor, see *Ioannis Kardassopoulos and Ron Fuchs v Republic of Georgia* (ICSID Case Nos ARB/05/18 and ARB/07/15) Award of 3 March 2010, **CLA-96**, ¶ 388. The *Houben* tribunal found an expropriation because of the State's failure to react to the permanent occupation of investor's property by squatters, who had usurped said property facilitated by the local administration, and for reasons unrelated to any prior conduct of the investor, see *Monsieur Joseph Houben v Republic of Burundi* (ICSID Case No ARB/13/7) Award (including extract of unofficial English translation), **CLA-256**, ¶¶ 206-216.

foreseeability requirement of causation.[316] It is in this unrelated context that the *Burlington* tribunal mentioned in passing a quote that Claimant found useful to rely on.[317]

231. In its actual analysis of causation and contributory fault, the *Burlington* tribunal adopted Bolivia's position. The *Burlington* tribunal assessed whether the investor's conduct was "*the triggering […], []or the decisive factor*" in "*the chain of events that eventually culminated*" in the State's unlawful act, in order to decide if it had "*sever[ed] the chain of causation between the wrongful conduct and the injury*," of if it had "*contribute[d] to the magnitude of the loss*" suffered by the investor.[318] While the majority in *Burlington* found for neither proposition based on the specific facts of that case,[319] its legal analysis supports Bolivia's position that the investor's prior conduct can be the triggering factor of the State's response and may thus severe the chain of causation.

232. Two, Bolivia's prior legal authorities are apposite for this Tribunal's analysis of causation, but Claimant simply misses the point when asserting the contrary. Per Claimant's own description, the ICJ's decision in *ELSI*, or the arbitral awards in *Biwater*, *Blusun* and *BG Group* all confirm that an investor's prior conduct or even external events can intervene in the chain of causation and severe it, *even when* said conduct is unrelated to the State's breach.[320]

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316 *Burlington Resources, Inc v Republic of Ecuador* (ICSID Case No ARB/08/5) Decision on Reconsideration and Award of 7 February 2017, **CLA-134**, ¶ 333 ("*One might object that using information post-dating the expropriation would somehow conflict with the requirement of causation, which is sometimes linked to foreseeability. However, the fact that some of the information used to quantify lost profits on the date of the award may not have been foreseeable on the date of the expropriation does not break the chain of causation*").

317 Reply on Quantum, ¶ 29 and footnote 33.

318 *Burlington Resources, Inc v Republic of Ecuador* (ICSID Case No ARB/08/5) Decision on Reconsideration and Award of 7 February 2017, **CLA-134**, ¶¶ 579-580 (emphasis added).

319 *Burlington Resources, Inc v Republic of Ecuador* (ICSID Case No ARB/08/5) Decision on Reconsideration and Award of 7 February 2017, **CLA-134**, ¶ 580 and footnote 1113 ("*Arbitrator Stern disagrees with the analysis of the majority on the contributory negligence of Burlington, as she is convinced that the behavior of Burlington refusing to pay its taxes played a major role in the chain of events leading to the expropriation. In other words, Arbitrator Stern believes that, if Burlington had paid its taxes, as it was obliged to do in order to respect the State's fiscal sovereignty, nothing would have happened.*").

320 Reply on Quantum, footnote 36 ("*Biwater Gauff (Tanzania) Ltd v United Republic of Tanzania* (ICSID Case No ARB/05/22) Award of 24 July 2008, **CLA-78**, *paras 789, 797-798 (the tribunal concluded that […] claimant had not suffered any economic losses as a result of Tanzania's measures given that [the investor's] mismanagement of its investment […] had caused that the FMV of the investment was nil even before Tanzania's measures); Case concerning Elettronica Sicula S.p.A. (ELSI) (United States of America v. Italy)*, ICJ, Judgment of 20 July 1989, **RLA-72**, *paras 77-79, 100-101, 119 (the tribunal concluded that the claimant had not suffered any economic loss as a result of Italy's measures because its financial difficulties laid in its own mismanagement[…])*; *Blusun S.A., Jean-Pierre Lecorcier and Michael Stein v. Italian Republic*, ICSID Case No. ARB/14/3, Award, **RLA-102**, *para. 394 (the tribunal concluded that Italy's measures had not caused any losses to the claimant, as claimant itself acknowledged that the proximate cause for its losses had been not obtaining substantial and timely project financing before the regulatory actions)*; *BG Group Plc. v. The Republic of Argentina*, UNCITRAL, Final Award of 24 December 2007, **RLA-100**, *paras 269-270, 449-453 (the tribunal concluded that Argentina had not expropriated the claimant's investments; instead, the tribunal found that other treaty breaches by Argentina had diminished the profitability of the claimant's investments rather than destroying their value, where part of the suffered losses were fluctuations proper of Argentina's renowned financial crisis)*") (emphasis added).

233. *A fortiori*, the causal chain would rightly be severed when the investor's prior conduct was the very factor that triggered the State's unlawful response, and, as such, the 'predominant', 'proximate', 'primary' or 'operative' cause of the harm suffered by an investor.[321]

234. *Fourth*, Claimant also argues that the facts on which Bolivia relies would have already been dismissed on jurisdiction or the merits, and thus may not be reargued for denying causation.[322] However, the Tribunal has not prejudged any legal or factual issue pertaining to jurisdiction or the merits.[323] Thus, Claimant's argument based on mere speculation as to the outcome of the Tribunal's factual assessments on jurisdiction and on the merits.

235. Moreover, Claimant's argument also defies logic. There is nothing prohibiting the same factual pattern from serving as the basis of different legal arguments on jurisdiction, merits and/or quantum. The rejection of a legal argument does not necessarily mean that the underlying facts were not true, but may simply mean that they did not meet the threshold required under each legal argument. To suggest otherwise, would mean that when Claimant's factual assertions fail to meet the standards for expropriation, then their FET and FPS claims should also be automatically rejected.

236. Besides, Claimant's authorities are inapposite, since they address the *res judicata* effect of a tribunal's prior award over legal questions already decided in said award. For example, the *CME* tribunal rejected the State's attempt to re-litigate causation, precisely because causation had already been decided in that tribunal's partial award.[324]

237. Claimant's authorities are nothing like this case, where the Tribunal acknowledged that "*certain matters of jurisdiction and merits in this arbitration may be intertwined with*

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321 *Biwater Gauff (Tanzania) Ltd v United Republic of Tanzania* (ICSID Case No ARB/05/22) Award of 24 July 2008, **CLA-78**, ¶¶ 786, 787; *Blusun S.A., Jean-Pierre Lecorcier and Michael Stein v. Italian Republic*, ICSID Case No. ARB/14/3, Award, **RLA-102**, ¶ 394; *BG Group Plc. v. The Republic of Argentina*, UNCITRAL, Final Award of 24 December 2007, **RLA-100**,¶ 428; *Burlington Resources, Inc v Republic of Ecuador* (ICSID Case No ARB/08/5) Decision on Reconsideration and Award of 7 February 2017, **CLA-134**, ¶ 580; S. Ripinsky and K. Williams, Damages in International Investment Law (British Institute of International and Comparative Law, 2008), **RLA-113(bis)**, p. 135 ("*under the legal test of causation, the key issue is whether the wrongful conduct was a sufficient, proximate, adequate, foreseeable or direct cause of the harm or injury. The legal test(s) of causation may be qualified by different adjectives, in positive or negative terms.*").

322 Reply on Quantum, ¶ 31.

323 Procedural Order No. 6, ¶ 3 ("*Upon deliberation, the Tribunal is of the view that certain matters of jurisdiction and merits in this arbitration may be intertwined with questions relating to quantum. As a result, notwithstanding the possibility that the Tribunal may yet decide to render an award on the basis of the Parties' submissions to date, the Tribunal would therefore wish to have the Parties' complete their submissions on quantum as soon as reasonably possible*") (emphasis added).

324 *CME Czech Republic BV v Czech Republic* (UNCITRAL) Final Award of 14 March 2003, **CLA-42**, ¶ 414 ("*The Respondent […] decided to re-litigate the issue of liability […] Essential parts of the Respondent's re-litigation narrative and legal presentations contrast with the Tribunal's findings in the Partial Award. Causation was the basic and fundamental subject of the First Phase*"), ¶ 424 ("*The Tribunal's considered conclusion is that the Partial Award is binding upon the Tribunal and the parties*").

questions relating to quantum,"[325] and thus requested that the Parties make submissions on Quantum, effectively un-bifurcating the proceedings and certainly expecting that the facts underlying these intertwined issues would be re-addressed. It is also recalled that at the Hearing, Bolivia expressly reserved its rights to address how the facts surrounding Claimant's actions had "*sever[ed] the causal link between any breach of the Treaty and the injury that Glencore suffered*,"[326] so Bolivia is now well within its right to do so at the Quantum stage. In this context, Claimant's argument is not only meritless and speculative, but also opportunistic.

238. *Fifth*, Claimant's position that an expropriation carried out under the State's police powers requires compensation is also wrong.[327] On the one hand, this point is unrelated to causation, and only shows Claimant's contradictory approach as to what may be re-litigated on quantum. On the other hand, Claimant's position is also legally flawed. It is settled law in investment jurisprudence that an expropriation under a State's police powers requires no compensation. As put by the *Quiborax* tribunal:

> *International law has generally understood that regulatory activity exercised under the so-called 'police powers' of the State is not compensable.*[328]

239. In conclusion, Claimant's attempt to avoid the impact of its prior conduct on causation is unavailing. As explained below,[329] Claimant's own conduct was the triggering and decisive factor that caused each of Bolivia's Reversions and the ensuing harm suffered by Claimant. This "*fatally severs the chain[s] of causation*,"[330] excluding any compensation to Claimant altogether.

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325 Procedural Order No. 6, ¶ 3 (emphasis added)

326 Transcript of the Hearing on the Merits, Day 4 (English), P854:L22-P855:L6 (Bolivia's Closing Statement) ("*And three, Glencore's knowing decision to ignore the risks surrounding the Assets severs the causal link between any breach of the Treaty and the injury that Glencore suffered. Whatever happened, we say, is ultimately attributable to its own conduct and specifically its bad business decision to ignore those risks, not to the conduct of the State. And this is codified, as you know, in Article 31 of the Articles on State Responsibility. We reserve our rights to develop those points if there is, we believe it won't be, a quantum phase*") (emphasis added).

327 Reply on Quantum, ¶ 32.

328 *Quiborax SA and Non Metallic Minerals SA v Plurinational State of Bolivia* (ICSID Case No ARB/06/2) Award of 16 September 2015, **CLA-127**, ¶ 202. See also *Marfin Investment Group Holdings S.A. and others v. Republic of Cyprus*, ICSID Case No. ARB/13/27, Award of 26 July 2018, **RLA-202**, ¶ 828; *Methanex Corporation v. USA*, NAFTA/UNCITRAL, Final Award on Jurisdiction and Merits of 3 August 2005, **RLA-45**, Part IV, Chapter D, Page 4, ¶ 7; *Philip Morris Brand Sàrl, Philip Morris Products S.A. and Abal Hermanos S.A. v. Oriental Republic of Uruguay*, ICSID Case No. ARB/10/7, Award of 8 July 2016, **RLA-43**, ¶ 305.

329 See Section 3.2 below.

330 *Ioan Micula and others v Romania* (ICSID Case No ARB/05/20) Award of 11 December 2013, **CLA-119**, ¶ 1154.

3.1.2 Claimant's Approach To Contributory Fault Is Also Wrong

240. Claimant's approach to contributory fault as a basis for reducing compensation is also misguided. Claimant has neither denied the wide recognition of contributory fault in international law, nor has addressed any of Bolivia's authorities that reduced compensation on that basis.[331]

241. Instead, Claimant attempts to avoid the impact of its own contribution to its damages by artificially raising the threshold for a finding of contributory fault, and by portraying arbitral practice that has reduced compensation due to an investor's contributory fault as a rare exception. Claimant's attempts are indefensible, for at least three reasons.

242. *First*, Claimant suggests that the investor's contribution to its damages "*must be material and significant*" and thus that "*[t]he threshold for finding contributory fault is high*".[332] In support of its assertion, Claimant quotes the Commentary to ILC Article 39 and the *Occidental* tribunal. However, both quotations are selective and misleading.

243. One, the sentence after Claimant's quotation of the Commentary to ILC Article 39 proves that Claimant's high threshold for contributory fault is artificial. As the Commentary explains:

> *[w]hile the notion of a negligent action or omission is not qualified, e.g. by a requirement that the negligence should have reached the level of being 'serious' or 'gross', the relevance of any negligence to reparation will depend upon the degree to which is has contributed to the damage as well as the other circumstances of the case. The phrase 'account shall be taken' indicates that the article deals with factors that are capable of affecting the form or reducing the amount of reparation in an appropriate case.*[333]

244. Thus, in codifying contributory fault, the ILC did not set a high threshold requiring 'gross' or 'serious' misconduct. Instead, *any* type of negligence is relevant, depending on its degree of contribution to the damages and on the case's circumstances. As put by the *Delagoa Bay Railway* tribunal, cited in the Commentary to ILC Article 39, "*[a]ll the circumstances that can be adduced against the concessionaire company and for the Portuguese Government mitigate the latter's liability and warrant … a reduction in reparation*".[334]

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331 Statement of Defence, ¶¶ 949-952 and footnotes 1264-1265; Reply on Quantum, ¶¶ 196-199.

332 Reply on Quantum, ¶¶ 197-198.

333 International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, Article 39 – Commentary, ¶ 5 (emphasis added).

334 *Delagoa Bay Railway Arbitration*, Award, dated 29 March 1900, quoted in International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, Article 39 – Commentary, footnote 625. See also *Occidental Petroleum*

245. In other words, as long as any conduct of the investor has a sufficient causal link to the damages, said conduct is capable of reducing the amount of damages, and is, as such, material to the examination of contributory fault. The significance of this material contribution is then reflected on the percentage of reduction to the damages that the tribunal considers justified, based on the conduct's degree of contribution to the damages and the case's factual context.

246. Two, Claimant also selectively relies on the *Occidental* tribunal, which actually followed Bolivia's approach. The *Occidental* tribunal found that investor's contributory conduct material and significant only by examining if said conduct was causally linked to the damages, without basing its findings on the seriousness or lawfulness of the investor's conduct. As put by the *Occidental* tribunal, it only had to determine "*whether [the investor's conduct] contributed to its injury in a material and significant way, or [it was] a minor contributory factor which […] cannot be considered, legally, as a link in the causative chain.*"[335]

247. In short, there is no high threshold for contributory negligence and as long as the investor's conduct is causally linked to the ensuing damages, it is both material and significant to the tribunal's assessment of contributory fault. In the present case, where Claimant's prior conduct provoked the very acts of Bolivia that are allegedly unlawful, the chain of causation clearly connects Claimant's conduct, the Reversions and the compensation claimed.

248. *Second*, Claimant is wrong to portray arbitral practice reducing damages due to contributory fault as a rare exception, and as only relating to cases of an investor's *illegal* conduct.[336]

249. One, Claimant's suggested requirement that the investor "*committed serious wrongdoing, such as breaching the laws of the host state*" finds no support whatsoever in the codification of the international law principles regarding contribution to injury. In fact, Claimant's approach directly contradicts ILC Article 39, which provides that the victim's "*wilful or negligent action or omission*" can be taken into account for the reduction of compensation,[337] without even stipulating that said conduct should be "*serious*" or "*gross*,"[338] let alone illegal.

Corporation and Occidental Exploration and Production Company v Republic of Ecuador (ICSID Case No ARB/06/11) Award, **CLA-254** , ¶ 676.

335 *Occidental Petroleum Corporation and Occidental Exploration and Production Company v Republic of Ecuador* (ICSID Case No ARB/06/11) Award, **CLA-254**, ¶ 673. See also *Yukos Universal Limited (Isle of Man) v Russian Federation* (PCA Case No AA 227) Final Award of 18 July 2014, **CLA-122**, ¶ 1615 ("*the Tribunal concludes that there is a sufficient causal link between Yukos' abuse of the system in some of the low-tax regions and its demise which triggers a finding of contributory fault on the part of Yukos*.") (emphasis added).

336 Reply on Quantum, ¶ 199.

337 International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, Article 39 (emphasis added).

338 International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, Article 39 – Commentary, ¶ 5 ("*the notion of a negligent action or omission is not qualified, e.g., by a requirement that the negligence should have*

Even Claimant's own selective quotation to the Commentary to ILC Article 39 discussed above confirms that there is no requirement for an investor's conduct to be illegal, or even intentional, for it lead to a reduction of its entitlement to compensation.[339]

250. Two, as Bolivia's previous authorities demonstrate (and Claimant has not challenged), investment tribunals have frequently assessed an investor's contributory fault even in cases where the investor's conduct was merely "*negligent or imprudent*."[340] It is settled arbitral practice that contributory fault may also occur where, for instance, "*[f]oreign investors […] misunderstand government actions, provoke political resentment, or not to do enough to manage it effectively*."[341] As put by the *MTD* Annulment Committee:

> *In an investment treaty claim where contribution is relevant, the respondent's breach will normally be regulatory in character, whereas the claimant's conduct will be different, a failure to safeguard its own interests rather than a breach of any duty owed to the host State*.[342]

251. Similarly, an investor's bad business decisions also constitute grounds to find contributory fault and reduce entitlements to compensation. As put by Ripinsky, "*[w]here a bad business judgment is considered to be just one of the causes leading to a loss, the inadequate assessment of investment risk constitutes contributory fault*."[343]

252. Investment tribunals regularly find that bad business decisions constitute contributory negligence.[344] For example, in *Azurix*, contributory negligence arose from a bad business

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reached the level of being 'serious' or 'gross', the relevance of any negligence to reparation will depend upon the degree to which is has contributed to the damage") (emphasis added).

339 Reply on Quantum, ¶ 197, quoting International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, Article 39 – Commentary, ¶ 5 ("*article 39 allows to be taken into account only those actions or omissions which can be considered as wilful or negligent, i.e. which manifest a lack of due care on the part of the victim of the breach for his or her own property or rights*") (emphasis added). See also *Burlington Resources, Inc v Republic of Ecuador* (ICSID Case No ARB/08/5) Decision on Reconsideration and Award of 7 February 2017, **CLA-134**, ¶ 576 ("*this willful or negligent act or omission must have 'materially contributed to the damage'*") (emphasis added).

340 S. Ripinsky, "Assessing Damages in Investment Disputes: Practice in Search of Perfect", *Journal of World Investment & Trade*, Vol. 10, No. 1, 2009, **RLA-125**, p. 20; *MTD Equity Sdn Bhd and MTD Chile SA v Republic of Chile* (ICSID Case No ARB/01/7) Award of 25 May 2004, **CLA-49**, ¶¶ 242-243; *Azurix Corp v Argentine Republic* (ICSID Case No ARB/01/12) Award of 14 July 2006, **CLA-63**, ¶¶ 424-429.

341 Th. Wälde and B. Sabahi, "Compensation, Damages and Valuation", in *International Investment Law*, Vol. 4, Issue 6, 2007, **RLA-126**, p. 38.

342 *MTD Equity Sdn. Bhd. and MTD Chile S.A. v. Republic of Chile*, ICSID Case No. ARB/01/7, Decision on Annulment of 21 March 2007, **RLA-209**, ¶ 101.

343 S. Ripinsky, "Assessing Damages in Investment Disputes: Practice in Search of Perfect", *Journal of World Investment & Trade*, Vol. 10, No. 1, 2009, **RLA-125**, p. 24.

344 See, indicatively, *Azurix Corp v Argentine Republic* (ICSID Case No ARB/01/12) Award of 14 July 2006, **CLA-63**, ¶¶ 425-429; *MTD Equity Sdn Bhd and MTD Chile SA v Republic of Chile* (ICSID Case No ARB/01/7) Award of 25 May 2004, **CLA-49**, ¶ 242; *Iurii Bogdanov, Agurdino-Invest Ltd. and Agurdino-Chimia JSC v. Republic of Moldova I*, Arbitral Award of 22 September 2005, **RLA-210**, ¶ 5.2.1; *RosInvestCo UK Ltd. v. The Russian Federation*, SCC Case No. V079/2005, Award of 12 September 2010, **RLA-121**, ¶¶ 665-668; *Yukos Universal Limited (Isle of Man) v Russian Federation* (PCA Case No AA 227) Final Award of 18 July 2014, **CLA-122**, ¶ 1604.

decision because the investor overpaid for the investment.[345] In *MTD*, the tribunal reduced compensation by 50% because of the investor's bad business decision in overpaying for land,[346] and in *RosInvestCo*, the tribunal reduced compensation because of the investor's speculative investment in securities.[347]

253. In short, there is no support for Claimant's position that the reduction of compensation due to investors' contributory fault is either rare, or restricted to cases of an investor's illegal conduct.

254. *Third*, Claimant merely repeats its speculative and opportunistic assertion that Bolivia cannot re-open factual arguments that will have allegedly been already rejected by this Tribunal.[348] However, as already explained, Claimant's assertion lacks any merit and is not even supported by its own authorities, which are, in any event, inapposite to this case where the Tribunal has effectively un-bifurcated these proceedings, without having prejudged any issue of jurisdiction or the merits.[349]

255. In conclusion, Claimant's position on contributory fault is just as indefensible as its position on causation. As explained below, Claimant's prior conduct was the predominant triggering factor that caused Bolivia's response and thus Claimant's own ensuing losses, or has, at least, materially and significantly contributed to the damages it seeks compensation for by provoking Bolivia's response. Accordingly, the Tribunal must either find that the causal chain leading to damages has been fatally severed, and thus deny compensation altogether, or, at least, substantially reduce any compensation awarded, due to Claimant's contributory fault.

3.2 Claimant's Own Acts Caused, Or At Least Materially Contributed To, The Reversion Of Its Assets

256. *In limine*, despite accepting that it bears the relevant burden of the proof,[350] Claimant has not put forth even a *prima facie* case of causation in relation to either its FPS or its alternative

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345 *Azurix Corp v Argentine Republic* (ICSID Case No ARB/01/12) Award of 14 July 2006, **CLA-63**, ¶¶ 425-429. See also S. Ripinsky, "Assessing Damages in Investment Disputes: Practice in Search of Perfect", *Journal of World Investment & Trade*, Vol. 10, No. 1, 2009, **RLA-125**, p. 24.

346 *MTD Equity Sdn Bhd and MTD Chile SA v Republic of Chile* (ICSID Case No ARB/01/7) Award of 25 May 2004, **CLA-49**, ¶¶ 242-243.

347 *RosInvestCo UK Ltd. v. The Russian Federation*, SCC Case No. V079/2005, Award of 12 September 2010, **RLA-121**, ¶¶ 665-668.

348 Reply on Quantum, ¶ 201.

349 See above, ¶¶ 234-236. See also Procedural Order No. 6, ¶ 3 ("*Upon deliberation, the Tribunal is of the view that certain matters of jurisdiction and merits in this arbitration may be intertwined with questions relating to quantum. As a result, notwithstanding the possibility that the Tribunal may yet decide to render an award on the basis of the Parties' submissions to date, the Tribunal would therefore wish to have the Parties' complete their submissions on quantum as soon as reasonably possible*") (emphasis added).

350 Reply on Quantum, ¶ 24 ("*Glencore Bermuda accepts that it bears the burden of proving the damage that it has suffered as a result of Bolivia's wrongful conduct*").

FET claims for any of the assets in dispute.[351] It is for Claimant to identify the specific damages allegedly caused by each separate breach that it invokes, and not for Bolivia to pre-emptively rebut this.

257. Accordingly, the sections below only address causation and contributory fault in relation to Claimant's expropriation allegations and explain why, in this case, Claimant's own acts caused – or at least materially contributed to – the Reversion of the Colquiri Mine Lease (**Section 3.2.1**), the Reversion of the Vinto Tin Smelter (**Section 3.2.2**), and the Reversion of the Antimony Smelter and the Tin Stock (**Section 3.2.3**).

3.2.1 Claimant Caused The Reversion Of The Colquiri Mine Lease

258. Claimant has failed to prove that the compensation claimed in connection with the reversion of the Mine Lease were dominantly caused by Bolivia's alleged unlawful acts. In fact, Claimant's general mismanagement of the social conflicts at the Mine forced the State to intervene and revert the Mine Lease in June 2012.[352] Claimant's own conduct was the triggering and decisive factor that caused the reversion of the Mine Lease and thus the ensuing alleged damages.

259. The events that led to the reversion of the Mine Lease were caused by a series of poor decisions by Claimant. These decisions are grouped in four main clusters: (i) Claimant's mismanagement of the social tensions at the Colquiri Mine; (ii) Claimant's decision not to timely involve Bolivia in resolving conflicts between the *cooperativistas*, workers and Sinchi Wayra, which culminated in a request for assistance at the eleventh hour, when the situation was out of control; (iii) Claimant's consistent failure to protect its own workers, which led them to distrust the company's ability to resolve the conflict and to eventually reject the presence of the company at the Mine; and (iv) Claimant's decision to promote inconsistent agreements with the *cooperativas* and to ultimately execute the Rosario Agreement, an unsurmountable obstacle to finding a solution to the conflict that would preserve Sinchi Wayra's operation of the Mine.

260. *First,* Claimant inherited the social tensions created by Comsur's poor management of the relationship between the workers and the *cooperativistas*, and failed to timely address them. Consequently, these social tensions festered and generated the unmanageable conflict that culminated with the *cooperativistas*' seizure of the Mine.

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351 See above, ¶¶ 218-223.

352 Statement of Defence, ¶ 682.

261. As Bolivia explained in its Statement of Defence[353] and in its Rejoinder on the Merits,[354] and as it was demonstrated in the Hearing on the Merits,[355] Comsur mismanaged its relationship with the *cooperativistas* and this mismanagement subsequently generated social tensions between *cooperativistas* and workers, which were, in turn, neglected by Comsur. Claimant does not dispute that:[356]

- Comsur failed to rehire the former COMIBOL employees who operated the Mine,[357] which compelled them to join the ranks of the *subsidiarios*, who would later organize themselves in *cooperativas*.[358] While in 1998, more than six hundred (more precisely, 670) COMIBOL employees worked at the Mine,[359] Comsur employed only 337 workers at the same Mine in December 2000.[360] Following the reversion, COMIBOL hired more workers, including 621 former *cooperativistas*, reaching a workforce of 1,240 employees;[361]

- Comsur chose to work with the recently formed *cooperativas*, because they provided for cheaper labour than formally hiring employees. The number of *cooperativistas* at the Mine quickly rose, allowing them to access the operations, including at the lower levels, which created tensions with the employed miners;[362]

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353 Statement of Defence, Section 2.5.1 and ¶ 683.

354 Rejoinder on the Merits, Section 2.5.1.

355 Transcript of the Hearing on the Merits, Day 1 (English), P190:L19-P191:L10 (Eskdale).

356 Claimant does not address Bolivia's account of the facts that occurred between 2000 and 2005. This is in great part because Claimant's witness on the facts related to the Mine, Mr Lazcano, did not work at the Mine between July 2001 and September 2008. Therefore, and despite the fact that he ventures to describe Sinchi Wayra's relationship with the workers and *cooperativistas* (Lazcano II, ¶ 2), he also cannot testify on the first years of Glencore's operations, as he admitted during the Hearing on the Merits. Transcript of the Hearing on the Merits, Day 2 (Spanish), P424:L8-15 (Lazcano) ("*Doctor: muy tampoco puedo opinar sobre algo que no he estado ahí. Pero si quiere que vierta una opinión, pero no he estado presente entonces. No sabría decirle la magnitud del problema*.") (Simultaneous translation: "*I cannot opine on something because I wasn't there, but if you would like to share my opinion, I could, but I wasn't there. I wouldn't be able to tell you about the magnitude of the problem*.").

357 Mr Cachi confirmed at the Hearing on the Merits that the workers that were dismissed by COMIBOL expected to be rehired by Comsur, but were not (Transcript of the Hearing on the Merits, Day 2 (Spanish), P676:L13-19 (Cachi)) and that this had a radical impact in the relationship between *subsidiarios* and miners (Transcript of the Hearing on the Merits, Day 2 (Spanish), P671:L8-12 (Cachi)).

358 Statement of Defence, ¶ 97; Rejoinder on the Merits, ¶ 136; Cachi I, ¶¶ 13-14.

359 Paribas, 1999, Privatisation of Bolivian mining assets, Confidential Information Memorandum of 16 August 1999, **RPA-4** p. 118.

360 Labor sheets of Colquiri, **C-279**, p. 90. In June 2000, right after Colquiri S.A. started operating the Mine, there were only 133 employees working at the Mine. Labor sheets of Colquiri, **C-279**, p. 30.

361 COMIBOL, List of Former *Cooperativistas* Currently Employed by COMIBOL, 2012-2013, **R-273**.

362 Statement of Defence, ¶ 98; Rejoinder on the Merits, ¶ 136; Mamani I, ¶ 12 ("*Por otra parte, y para evitar el pago de cargas laborales, Comsur decidió realizar trabajos temporales de rehabilitación con los cooperativistas en los niveles inferiores de la Mina que eran explotados al mismo tiempo por los trabajadores de la empresa. Esto fue un error. Por un lado, al permitirles explotar al mismo tiempo un mismo nivel, generó choques entre cooperativistas y empleados. Por otro lado, consentir la entrada de personas ajenas a la empresa a los niveles inferiores de la Mina permitió a los cooperativistas conocer en detalle su estructura e identificar los turnos del personal de vigilancia y los horarios en los*

- Without the manpower to keep the *cooperativistas* in check, over the years Comsur started to lose control over the Mine.[363]

262. Glencore International's 2004 due diligence shows that the company was well aware of Comsur's difficulties with the *cooperativistas* and that it considered their relationship problematic. [redacted]

[redacted][365]

cuales no habría empleados (normalmente entre los distintos turnos, cuando se realizan las explosiones). Los cooperativistas también pudieron identificar accesos clandestinos a los niveles inferiores (sobre todo a través de los ductos de ventilación.") (Unofficial translation: "*On the other hand, and in order to avoid paying employment costs, Comsur decided to carry out temporary rehabilitation works with the cooperativistas in the inferior levels of the Mine, exploited at the same time by the company's workers. This was a mistake. On the one hand, by allowing them to exploit at the same time the same level, clashes were generated between cooperativistas and employees. On the other hand, consenting to the entrance of persons outside the company to the lower levels of the Mine permitted the cooperativistas to learn its structure in detail and identify the shifts of the surveillance personnel and the times at which there would be no employees (normally between the shifts, when explosions are detonated). The cooperativistas could also identify clandestine access ways to the lower levels (particularly through ventilation conducts*").

363 Transcript of the Hearing on the Merits, Day 3 (Spanish), P901:L2-P902: L2 (Mamani) ("*antes del 2000, por ejemplo, no se veía el ingreso a las áreas que no les corresponde a los subsidiarios o llamamos cooperativistas […] Se nos permitió la infiltración del 2001 de a poquito. Y eso obviamente hace de que obviamente ese sector incremente poco a poco. No sé si la Comsur lo ha considerado de que obviamente está tomando una relación estrecha o en su defecto no lo ha calculado de que más bien el permitir de ese filtro de trabajadores informales a las áreas que no les correspondían era que obviamente iba a ocasionar fuertes daños o perjuicios a la empresa, como también un problema social*") (Simultaneous translation: "*Before 2000, for instance, we didn't see people going into the areas that were not assigned to the subsidiarios or the co-op members. […] But then people started to go in slowly and gradually [since 2001], and that started to grow little by little. I don't know if Comsur has looked at this as a close relation or has failed to calculate things, but there were people going into areas they were not supposed to be in, and this, of course, would have caused problems with the Company and also a social problem*"); Mamani II, ¶ 10 ("*[L]a decisión de operar la Mina con tan pocos trabajadores tuvo un efecto perverso. Los entonces subsidiarios crecieron en número y organización (pasando a conformar ahora la Cooperativa 26 de Febrero) y tomaron control de muchas más áreas del interior de la Mina. Dada la diferencia en número de empleados y cooperativistas, la empresa tenía dificultades para controlarlos, algo que no ocurría con COMIBOL*.") (Unofficial English translation: "*[T]he decision to operate the mine with so few workers had a perverse effect. The then subsidiaries grew in number and organization (now forming the Cooperativa 26 de Febrero) and took control of many more areas inside the Mine. Given the difference in number of employees and cooperativistas, the company had difficulties in controlling them, something that did not happen with COMIBOL*").

364 [redacted].

365 [redacted]

263. Mr Eskdale, at the time Claimant's Asset Manager for Latin America, confirmed at the Hearing that he was aware that the due diligence indicated that the *cooperativistas* could take over the Mine at any time[366] and that this risk was specifically addressed in the share purchase agreement through which Glencore International acquired the Assets.[367] Following the acquisition, however, Claimant never properly addressed the situation, even though the *cooperativistas* kept threatening to take over the Mine. These threats were also described in Sinchi Wayra's first management report of January 2006 (recently obtained through disclosure), which stated that "*[t]hreats from local Cooperatives to invade Colquiri persisted*."[368]

264. By March 2006, Sinchi Wayra had already realized that the fact that *cooperativistas* largely outnumbered the workers was problematic, but it failed to take any measures to address the issue in the six years that followed.[369] At the time, the company reported that *cooperativistas* had already "*started to invade lower level areas where [Sinchi Wayra] works to steal minerals*."[370]

265. By June 2006, the situation had not improved, as described in the monthly management report recently disclosed:

> *In parallel to salary negotiations an important negotiation was conducted with the Mining Cooperative 26 of February from Colquiri. This cooperative has maintained the threat to take over the mine in Colquiri for the last 18 months until the agreement was signed. The objective of this agreement is to establish a new relationship framework, in which the Cooperative will exploit in authorised areas only, while SW will provide technical support to improve working conditions in those areas and will purchase minerals from the cooperative at competitive prices.*[371]

266. This management report demonstrates that Claimant did not have full control of the Mine, as (i) the *Cooperativa 26 de Febrero* worked in the areas where it wished to work, instead of

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366 Transcript of the Hearing on the Merits, Day 1 (English), P191:L11-22 (Eskdale) ("*Q: […] And you knew that the cooperativistas can take over the Mine and stop activities at any time; correct? A. Well, that's a statement that's made in a report by one of my technical people, and my job was to evaluate what that meant in the context of managing the operations. Q. So, you were aware that someone from your technical team who was with you during the same three-hour visit to Colquiri on the same day concluded, on the basis of that visit, that, at any time, cooperativistas can take over the Mine and stop activities; correct? A. Yes.*").

367 The seller negotiated to exclude from material adverse effects "*any change arising in connection with, takeovers, invasions, or violent acts undertaken primarily to achieve labor, social or student objectives, actions undertaken by indigenous communities, social movements, strikes, work stoppages, work-to-rule actions, go-slows or similar labor difficulties or other force majeure events occurring after the date hereof*." Second Amended and Restated Stock Purchase Agreement between Minera and Glencore International (Iris shares) of 30 January 2005, **C-198**, p. 7, Article 1, Section 1.1; Transcript of the Hearing on the Merits, Day 1 (English), P218:L15-P219:L21 (Eskdale).

368 Sinchi Wayra S.A. Management Report of January 2006, GB007059, **R-443**, p. 3.

369 Sinchi Wayra S.A. Management Report of March 2006, GB007318, **R-444**, p. 3.

370 Sinchi Wayra S.A. Management Report of March 2006, GB007318, **R-444**, p. 3.

371 Sinchi Wayra S.A. Management Report of June 2006, GB007952, **R-445**, p. 5.

keeping to the areas authorized by Claimant; and (ii) this *Cooperativa* continued threatening to take over the Mine several months after Glencore's acquisition.[372]

267. The agreement mentioned in the June 2006 report[373] did not have the desired effect,[374] as the *cooperativistas* kept working in unauthorized areas: by 2008 the *Cooperativa 26 Febrero* covered areas in almost every corner of the Mine,[375] and by 2011 they had practically taken over control of it.[376]

268. The assignment and takeover of further areas in the Mine by the *cooperativistas* caused unrest among the workers, and this unrest was further fuelled by the fact that those areas had usually been prepared by the workers and were ready for exploitation when taken over by the *cooperativistas*.[377] As the number of *cooperativistas* grew, the number of *juqueos* (thefts) of ore and tools increased.[378] In May 2012, the *cooperativistas* outnumbered the workers by 3 to 1.[379]

269. Claimant states it did not mismanage the Mine and asserts that "*the evidentiary record in this arbitration has proven that Bolivia's allegations are false*,"[380] but points to no specific evidence. In fact, Claimant cannot show that it properly addressed the social conflicts that were repeatedly flagged by its managers in Sinchi Wayra's reports. All that Claimant is able to argue is that it could not have contributed to its own losses because Bolivia had decided to revert the Mine several weeks before the *cooperativistas* finally took over the Mine.[381]

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372 Sinchi Wayra S.A. Management Report of June 2006, GB007952, **R-445**, p. 5.

373 Agreement between Sinchi Wayra, Colquiri, Colquiri Union, FSTMB, Cooperativa 26 de Febrero, Fedecomin La Paz, and Fencomin of 22 September 2006, **C-224**.

374 Subsequent reports continued to state that the Mine was plagued by "*social issues*" until the *cooperativistas* took over. Sinchi Wayra SA Monthly Report of January 2009, GB011069, **R-446** ("*The production of this mine is below budget. The operation was not been normal due to the social issues that continue to take place*"); Sinchi Wayra SA Monthly Report of January 2011_GB012381, **R-447** ("*There is a lot of social pressure, including work space invasion and stealing of mineral from the cooperatives' people due to high tin prices*"); Sinchi Wayra SA Monthly Report of February 2011, GB012431, **R-448** ("*Mine and plant production were below the budget because of social internal problems at the mine, the plant and the maintenance departments*").

375 Plan of areas assigned by Sinchi Wayra to the *cooperativas* as of 2008, **R-197** (the areas in green were under the *cooperativas*' control).

376 Cachi I, ¶ 31 ("*Para finales de 2011, los cooperativistas teníamos prácticamente el control de la Mina*.") (Unofficial English translation: "*By the end of 2011, we the cooperativistas practically controlled the Mine*").

377 Mamani II, ¶ 18 ("*[E]l sentimiento de los trabajadores era que nosotros hacíamos todo el trabajo pesado de adecuar las áreas para que, luego, lo cooperativistas pudiesen explotarlas con la aceptación Sinchi Wayra*.") (Unofficial English translation: "*The feeling of the workers was that we did all the heavy lifting to adapt the areas so that, later, the cooperativistas could exploit them with Sinchi Wayra's approval*").

378 Mamani II, ¶ 20.

379 La Patria, *Cooperativistas toman mina en Colquiri y hieren a siete mineros*, press article of 31 May 2012, **R-21**; Cachi I, ¶ 14.

380 Reply on Quantum, ¶ 31.

381 Reply on Quantum, ¶ 202.

270. Claimant bases this allegation not on the evidentiary record of this arbitration, but solely on the minutes of a 12 May 2012 meeting. Claimant suggests that the State decided to nationalize Colquiri during that very meeting, which assembled government officials and the Union of Huanuni (not Colquiri),[382] choosing to ignore the evidence showing that the State had no such intention and the fact that the workers of Colquiri opposed the nationalization of the Mine.[383] These minutes refer to the document produced by the Mining Unions Congress in Potosí, convened by the the *Federación Sindical de Trabajadores Mineros de Bolivia* (also present at the meeting) in 2011.[384] This document demanded the nationalization of all Bolivian mines,[385] even though it also noted that "*[a]l actual planteamiento de nacionalización de las minas, el gobierno del M.A.S. ha respondido que no porque los propios trabajadores de las minas privadas se oponen*."[386]

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382 Agreement of 10 May 2012, **C-256**, p. 1. Mr Mamani explained that this document had no effect over Colquiri at the Hearing on the Merits. Transcript of the Hearing on the Merits, Day 3 (Spanish), P908:L9-18 (Mamani) ("*Colquiri no tuvo partícipe en esta reunión. […] Porque para cualquier otra decisión del distrito debía ser quien represente y esté en esa reunión mi persona, en representación de Colquiri. Y Huanuni no puede tomarse atribuciones de poder decidir sobre la suerte de los trabajadores del distrito minero de Colquiri, que es otro distrito que obviamente tiene todas sus particularidades*") (Simultaneous translation: "*Colquiri did not participate in this meeting, but we did have knowledge of the Agreement, but we were not party to this Agreement. In connection with any other decision of the district, well, I had to be present at that meeting. Huanuni cannot decide on the fate of the Colquiri District Union. That's another district. It has its own particularities*"). Mr Córdova also explained the contents of the document. Transcript of the Hearing on the Merits, Day 2 (Spanish), P594:L22-P595:L9 (Córdova) ("*Aquí dice que se va a convocar a reunión porque hay una condición, la que hemos visto en el documento anterior, el gobierno no va a tomar jamás la decisión de revertir la mina si es que no está de acuerdo el sindicato. Pues esta reunión era para pedir la opinión del sindicato, primero de Colquiri, pero el sindicato no estaba de acuerdo, como lo podemos demostrar por la reunión que yo sostuve con ellos doce días después*") (Simultaneous translation: "*Well, they talk about calling a meeting. There was a condition, and we saw the condition in the prior Document. The document--the Government will never take the Decision of reverting the Mine if this Union is not in agreement. So we were asking for the opinion of the Colquiri Union, but the Colquiri Union was not in agreement, and we can show this with the meeting I attended [with the workers, twelve days later]*").

383 Córdova, ¶ 35; Mamani II, ¶ 28.

384 Agreement of 10 May 2012, **C-256**, p. 1 ("*en cumplimiento del Documento del Congreso Minero de Potosí*.") (Unofficial translation: "*in compliance with the Document of the Mining Congress of Potosí*").

385 Federation of Mining Workers Unions in Bolivia, *Political Document approved in the XXXI National Mining Congress* of 3 September 2011, **R-277**, p. 92 ("*[l]a nacionalización de las minas […] es una reivindicación elemental que debe materializarse sin indemnización alguna y bajo control social de los trabajadores*.") (Unofficial translation: "*[t]he nationalisation of the mines […] is an elementary claim that must materialise without any compensation and under the social control of the workers*").

386 Federation of Mining Workers Unions in Bolivia, *Political Document approved in the XXXI National Mining Congress* of 3 September 2011, **R-277**, p. 92 ("*Al actual planteamiento de nacionalización de las minas, el gobierno del M.A.S. ha respondido que no porque los propios trabajadores de las minas privadas se oponen*") (Unofficial English translation: "*To the current proposal for nationalisation of the mines, the government of M.A.S. has said no because the workers of the private mines themselves are against [it]*") (emphasis added). Mr Mamani confirmed this at the Hearing on the Merits. Transcript of the Hearing on the Merits, Day 3 (Spanish), P916:L13-P917:L5 (Mamani) ("*P: […] Usted dijo en el párrafo 28 de su segunda declaración que para nacionalizar, para ejecutar la nacionalización, para nacionalizar la mina Colquiri usted tenía que tener el acuerdo del sindicato de Colquiri. ¿Correcto? […] R: Correcto. R: Correcto. P: Y usted dice también, y lo discutimos hace algunos minutos, que en mayo de 2012 los trabajadores de Colquiri no estaban en favor de la nacionalización. Eso también se puede ver en el párrafo 30. R: Correcto*") (Simultaneous translation: "*Q: […] At Paragraph 28 of your Second Witness Statement, that to execute the nationalization of the Colquiri Mine, you had to have the Agreement of the Colquiri Union? […] A. That's correct. Q. And you also said--and we discussed this a few moments ago, that in May 2012, the workers of Colquiri were not in favor of nationalization, and you can look at Paragraph 30 as well. A. Correct*").

271. In any event, the minutes cited by Claimant are in direct contradiction to the Bolivian constitutional framework (which established a more active role for COMIBOL but also protected the private operators' pre-existing mining rights) and to all of Bolivia's actions before the reversion:

- Sinchi Wayra's internal communications on 22 May 2012 (reporting on a meeting with COMIBOL on the same day)[387] show that the Government was committed to entering into joint venture agreements concerning Claimant's mine leases and was pushing to finalise the negotiations at the time (which is inconsistent with Claimant's allegation that the State had by then already decided to revert the Mine Lease);[388]

- After the *cooperativistas* took over the Mine, Bolivia did what it could to resolve the conflict so that Sinchi Wayra could continue its operations: it is undisputed that on 3 June 2012, the State executed a memorandum of understanding with the unions, in which it committed to finding a way for Sinchi Wayra to continue to operate the Mine.[389] Claimant does not dispute that, after this, the Government sought Sinchi Wayra's and the unions' support to work on a proposal that would preserve the workers' labour stability and comply with the Mine Lease, and prepared up to five different offers, which were then submitted to the *cooperativistas* for approval,[390] with no success.

272. Had Bolivia decided to revert the Mine Lease by mid-May 2012, it would not have gone through the effort and political cost of promoting negotiations and attempting to solve the social conflict. Claimant's argument relies on a single document, to the exclusion of the

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387 Meeting Minutes between COMIBOL, FSTMB and the Colquiri, Porco and Bolívar Unions of 22 May 2012, **R-276**.

388 Email from Glencore International (Mr Hartmann) to Glencore International (Mr Eskdale) and Sinchi Wayra (Mr Capriles) of 22 May 2012, **C-110**, p. 3 ("*Dr. K. piensa que después de la reunión de esta tarde, Córdova lo presionará para sacar una versión final hasta la próxima semana, que incorpore los comentarios de las Gerencias Técnica y Administrativa de Comibol. Le pedí a Dr. K. que en el proceso de redacción final del Contrato, analicemos detenidamente las sugerencias que emanen en las Gerencias*") (Unofficial translation: "*Dr. K. thinks that after the meeting this afternoon, Córdova will press him to get a final version until next week, which incorporates the comments of the Technical and Administrative Directorates of Comibol. I asked Dr. K. that in the final drafting process of the Contract, we carefully analyse the suggestions that come from the Directorates*") (emphasis added).

389 Minutes of understanding with the Sindicato de Trabajadores Mineros de Colquiri and the Federación Sindical de Trabajadores Mineros de Bolivia of 3 June 2012, **C-115**, p. 1 ("*acuerdan viabilizar la solución del conflicto generado por la toma ilegal de la mina de la empresa Sinchi Wayra, por parte de miembros de la Cooperativa 26 de Febrero de Colquiri. en los siguientes términos: […] hará respetar los contratos mineros con derechos preconstituidos del distrito minero de Colquiri […] Una vez resuelto el conflicto de Colquiri, se procederá a la firma de contratos de migración acordados con Colquiri, Porco y Bolivar*.") (Unofficial English translation: "*agree to make possible the solution of the conflict generated by the illegal seizure of the Sinchi Wayra mine by members of Colquiri's Cooperativa 26 de Febrero, in the following terms: […] ensure the observance of mining contracts including pre-existing rights in the mining district of Colquiri […] Once the Colquiri conflict is resolved, the migration contracts agreed upon with Colquiri, Porco and Bolivar will be signed*").

390 La Razón, *Minería hace 5 ofertas, pero aun no convence a los cooperativistas*, press article of 5 June 2012, **R-215**.

remainder of the evidentiary record, and seeks to mischaracterize Bolivia's conduct towards the social conflict.

273. *Second*, and contrary to what Claimant asserts, Sinchi Wayra requested the intervention of the State at the eleventh hour, making it impossible for COMIBOL to resolve a conflict that had been escalating for years and that had been fuelled by Claimant's operations.[391] This failure to report the state of the social tensions at the Mine and to address them also demonstrates that Claimant's own conduct was the triggering and decisive factor that caused the reversion of the Mine Lease. Claimant's position on this matter is twofold:

274. One, Claimant refers to COMIBOL's "*authority over any agreement that granted the cooperativistas rights to mine the deposit*,"[392] implying that COMIBOL was somehow responsible for Sinchi Wayra's relationship with the *cooperativistas*. COMIBOL, however, was never active in these negotiations (and Claimant cannot prove otherwise), and Claimant does not dispute that the formal assignment of areas to *cooperativistas* was always preceded by an "*acuerdo preliminar*"[393] between the mining company and the *cooperativas*, which was later communicated to COMIBOL in observance of the required formalities.[394] This practice had been established by Comsur and was followed by Sinchi Wayra.[395] Claimant also does not dispute that these formal agreements were not properly enforced and that the *cooperativas* were often found working in unauthorized areas in the Mine;[396]

275. Two, Claimant alleges that, from 2005 to 2012, it "*successfully managed*" the relations with the *cooperativistas*, but that, "*in the first quarter of 2012 [the] high mineral prices motivated*

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391 Statement of Defence, ¶ 685.

392 Reply on Quantum, ¶ 203.

393 Letter from Compañía Minera Colquiri S.A. to COMIBOL of 14 January 2009, **R-339**.

394 Preliminary Agreement between Comibol and Colquiri to Authorize Mining Works in an Area of Level 325 of the Colquiri Mine of 13 January 2009, **C-237**, p. 1.

395 Rejoinder on the Merits, ¶ 260 ("*the assignment of level -325 to the cooperativas in 2009 was preceded by a request made directly by the Cooperativa 26 de Febrero to Colquiri.Following that request, Colquiri and the cooperativistas reached an 'acuerdo preliminar' without COMIBOL's involvement (as discussed above, this practice had already been established by Comsur). In addition, at Sinchi Wayra's suggestion, the technical assessment for the viability of the assignment and the exploitation of level -325 was to be carried out between the company and the Cooperativa 26 de Febrero exclusively*"). See Letter from COMIBOL to Compañía Minera Colquiri of 26 March 2009, **R-340**.

396 Rejoinder on the Merits, ¶ 262; Mamani II, ¶ 17 ("*el Señor Lazcano afirma que no es cierto que todos los años Sinchi Wayra cediese a la Cooperativa 26 de Febrero nuevas áreas en el interior de la Mina. Puede que estos acuerdos no se hayan formalizado con la COMIBOL, como hizo Sinchi Wayra en ciertas ocasiones. Sin embargo, todos los años encontrábamos a cooperativistas en niveles cada vez más profundos, con mayor frecuencia y con la aceptación de Sinchi Wayra. Si la presencia de los cooperativistas en estas áreas no era autorizada, en cualquier caso, ninguna medida tomada por Sinchi Wayra era efectiva para controlarlos*.") (Unofficial English translation: "*Mr Lazcano affirms that it is not true that every year Sinchi Wayra transferred new areas inside the Mine to the Cooperativa 26 de Febrero. These agreements may not have been formalized before COMIBOL, as Sinchi Wayra did on certain occasions. However, every year we found cooperativistas at increasingly deeper levels, more often and with the acceptance of Sinchi Wayra. In any case, if the presence of cooperativistas in these areas was not authorized, no action taken by Sinchi Wayra was effective to control them*"). See Lazcano II, ¶ 25.

the cooperativistas to seek access to new areas," and that despite "*repeated calls for assistance*," "*Bolivia stopped collaborating with Glencore Bermuda*."[397] This is not true.

276. The *cooperativas* were always looking for access to new areas of the Mine – as confirmed by Mr Lazcano[398] and Mr Cachi[399] – and had been working outside their assigned areas for years, as shown by Sinchi Wayra's own management reports, and by a September 2006 agreement executed between the *cooperativas* and Sinchi Wayra, which established four degrees of sanctions for the *cooperativistas* who were found in unauthorized areas.[400]

277. As for the "*repeated calls for assistance*," Claimant makes reference only to a letter sent by the Colquiri Union (not by Sinchi Wayra) on March 2012[401] and to two letters sent by Colquiri: one sent on 3 April 2012 and another sent on 30 May 2012 informing COMIBOL that the *cooperativistas* had already taken over the Mine.[402] The alleged repeated requests for assistance are just one letter of 3 April 2012, nothing more. This letter actually shows that Colquiri had chosen not to involve the State in the social conflicts up until that date, as it states that "*[d]ichas perturbaciones al desenvolvimiento de la operación minera señalada, han sido atendidas en gran medida y hasta el momento por [la] empresa.*"[403] In fact, neither Sinchi Wayra's strategic plan for conflict prevention nor the company's agreement with the *cooperativas* contemplated the State's participation in conflict prevention or resolution.[404]

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397 Reply on Quantum, ¶ 203.

398 Transcript of the Hearing on the Merits, Day 2 (Spanish), P426:L18-21 (Lazcano) ("*Doctor: lo que sucede en Colquiri- y lo vuelvo a reiterar- es una solicitud permanente de la cooperativa, principalmente la 26 de Febrero, por obtener mayor cantidad de áreas de trabajo*.") (Simultaneous translation: "*In Colquiri, once again, there was a permanent request by Co-op 26 February to obtain more work areas. This is something that was repeated throughout time*").

399 [redacted]

400 Agreement between Sinchi Wayra, Colquiri, Colquiri Union, FSTMB, Cooperativa 26 de Febrero, Fedecomin La Paz, and Fencomin of 22 September 2006, **C-224**, Articles 1, 2, 4 and 5.

401 Letter from Colquiri Union (Mr Estallani) to the Ministry of the Presidency (Mr Romero) of 29 March 2012, **C-251**.

402 Letter from Colquiri SA (Mr Capriles Tejada) to Comibol (Mr Córdova Eguivar) of 3 April 2012, **C-30**; Letter from Colquiri SA (Mr Capriles Tejada) to Comibol (Mr Córdova Eguivar) of 30 May 2012, **C-31**, p. 1.

403 Letter from Colquiri SA (Mr Capriles Tejada) to Comibol (Mr Córdova Eguivar) of 3 April 2012, **C-30**, p. 1 (Unofficial translation: "*Those disturbances to the performance of this mining operation have been so far, to a large extent, taken care of by [the] company*").

404 Strategic Plan of Conflict Prevention of Sinchi Wayra, **C-218**; Agreement between Sinchi Wayra, Colquiri, Colquiri Union, FSTMB, Cooperativa 26 de Febrero, Fedecomin La Paz, and Fencomin of 22 September 2006, **C-224**.

Bolivia had not been involved in the conflict and was only informed of the situation once it was unmanageable: less than 8 weeks after the first letter of 3 April, the *cooperativistas* took over the Mine.

278. Claimant neglects to mention that, after the then-Minister of Mining visited the Mine on 13 March 2012,[405] a commission from the Ministry conducted a technical inspection of its lower levels and reported thefts and damages to the mining equipment.[406] The Ministry, in a letter sent on 26 April 2012, requested more information from the mining company in order to assess the damages suffered by Colquiri.[407] Neither Colquiri nor Sinchi Wayra ever replied to this letter.[408] As soon as the State became aware that Colquiri was suffering significant damages, it took action. However, even at this stage, Sinchi Wayra failed to provide the required information.

279. *Third*, Claimant's consistent failure to protect its own workers led them to distrust the company's ability to resolve the social conflict and to eventually reject the presence of the company at the Mine altogether.[409] As mentioned above, the social tension had been a constant fixture in the day-to-day operation of the Mine, and Sinchi Wayra either took no action or failed to implement measures to address the problem (such as not sanctioning the *cooperativistas* for their non-compliance with the agreement executed with the company).[410] As such, Claimant's mismanagement of its relationship with the workers also shows that Claimant's own conduct was the triggering and decisive factor that caused the reversion of the Mine Lease.

280. After the *cooperativistas* took over the Mine on 30 May 2012, the Colquiri Union participated in the negotiations with Sinchi Wayra, the *cooperativas* and the Government.[411] As the *cooperativistas* rejected the offers presented by the company and the Minister of Mines, the

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405 Claimant has tried to portray this visit as "*surprising*" (Lazcano II, 32) and has affirmed that the Minister visited the Mine to request "*details about its reserves and the investments made by Sinchi Wayra*" (Reply on the Merits, ¶ 111), disingenuously omitting the fact that the Minister had been invited by the company itself to verify the new areas that it planned to assign to the *cooperativas*. [redacted]; Internal Documents (Mining Ministry) on the Visit to the Colquiri Mine in March 2012, **R-343**, p. 7.

406 Letter from the Ministry of Mines (Mr Villca) to Sinchi Wayra (Mr Capriles) of 26 April 2012, **C-254**, pp. 1, 3.

407 Letter from the Ministry of Mines (Mr Villca) to Sinchi Wayra (Mr Capriles) of 26 April 2012, **C-254**, p. 1.

408 Claimant has added a draft response to this letter to the record - Letter from Sinchi Wayra (Mr Capriles) to the Vice Minister of Mining Policy, Regulation and Auditing (Mr Villca) of 3 May 2012, **C-255**. See Transcript of the Hearing on the Merits, Day 2 (Spanish), P455:L5-P456:L22 (Lazcano).

409 Statement of Defence, ¶ 686.

410 Mamani II, ¶¶ 17, 21-22.

411 Mamani I, ¶¶ 30-37.

workers started considering the reversion of the Mine as the only possible solution to the conflict. They expressed their concerns to Sinchi Wayra's management:

> *[l]e explicamos nuestras preocupaciones (sobre todo, por la forma como la empresa había venido cediendo y entregando áreas de la Mina desde hacía mucho tiempo a los cooperativistas) y que en esos momentos críticos no solamente se estaba jugando la estabilidad laboral de nuestros trabajadores, sino el futuro mismo de la Mina. Para nosotros, ya era claro que Sinchi Wayra había perdido el control de la Mina y la confianza de sus propios trabajadores.*[412]

281. *Fourth*, the workers' distrust evolved to a breaking point after Sinchi Wayra promoted inconsistent agreements with the national leaders of the *cooperativas* and with a fraction of the *Cooperativa 26 de Febrero*.[413] It is undisputed that, on or around 5 June 2012, the Minister of Mines proposed the San Antonio vein to the *Cooperativa 26 de Febrero with the workers' consent*, and that this offer was rejected.[414] In Mr Mamani's words:

> *cuando ofrecemos la veta San Antonio ya es de nuestro conocimiento y de nuestra aceptación para ceder un área de -- áreas de trabajo a la cooperativa, lamentablemente la Cooperativa 26 de Febrero rechazó en su totalidad. ¿Y qué es lo que buscaban las cooperativas? Estaban pidiendo otras áreas de trabajo que son más ricas en Colquiri, y nosotros dijimos: "Si la empresa ya está entrando a ese tipo de gestos de poder reunirse con la cooperativa, bueno, para nosotros lleva a entender que se le estaba entregando la más rica. ¿Y los trabajadores sindicalizados en qué quedaríamos?"[…] eso ya ponía en total riesgo nuestra estabilidad laboral. Porque nosotros dependemos de esas vetas. ¿Pero si entregamos la más rica, bueno, entonces, en qué nosotros quedamos? De seguro la empresa nos iba a decir: "Mire, ya no hay yacimiento, hay que hacerlo sin personal, hay que ajustar salarios, hay que despedir personal".*[415]

282. As Bolivia has previously explained, on 7 June 2012, the Colquiri workers, the villagers and a significant portion of the *cooperativistas* took part in a general open council (*Gran Cabildo*)

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412 Mamani I, ¶ 37 (Unofficial English translation: "*[w]e explained our concerns (in particular, regarding the manner in which the company had been assigning and relinquishing areas of the Mine gradually and for a long time) and that during those critical moments, the employment stability of our workers as well as the future of the Mine itself were at stake. In our opinion, there was no doubt that Sinchi Wayra had lost control over the Mine and the trust of its own workers*").

413 Statement of Defence, ¶ 687.

414 La Patria, *Colquiri: Mineros suspenden labores y cooperativistas no aceptan veta*, press article of 5 June 2012, **C-118**, p. 1; Rejoinder on the Merits, ¶ 302.

415 Transcript of the Hearing on the Merits, Day 3 (Spanish), P946:L2-P947:L3 (Mamani) (Simultaneous translation: "*when we offered the San Antonio vein, this, for us to assign work areas to the co-op, the Co-op 26 de Febrero rejected this. What were they looking for? Who were the co-ops looking for? They were asking for other working areas that are richer in Colquiri. And we said if the Company is engaging in those kinds of gestures and they meet with the co-op, well, we are giving them the richest areas. And what would be the position that we, unionized workers, are going to be in? […] And that risked our or jeopardized our job stability because we depend on those veins. If we give them the richest one, what is going to be left for us? They're going to say, 'Okay, there are no more deposits, we're going to have to adjust salaries, we are going to have to fire people'*"); Mamani II, ¶¶ 42-43 ("*[S]i la propuesta de ceder la veta San Antonio no era suficiente para la Cooperativa 26 de Febrero, las opciones que le quedaban a los trabajadores con Sinchi Wayra como operador serían inaceptables*") (Unofficial English translation: "*[I]f the proposal to cede the San Antonio vein was not enough for the Cooperativa 26 de Febrero, the options left to the workers with Sinchi Wayra as operator would be unacceptable*").

to address the social conflict. Claimant does not dispute that this *Cabildo* studied a Government *proposal* in order to determine if the reversion of the Mine Lease would be acceptable to all the authorities.[416] Ignoring the developments of the *Cabildo* and being fully aware of the support for the reversion,[417] at around 11 pm on the same day, Glencore International, through Colquiri and without informing the State, executed an agreement to assign the Rosario Vein – the richest vein of the Mine – to the *cooperativas*.

283. Claimant alleges that this agreement – the Rosario Agreement[418] – solved the conflict at the Mine,[419] and insists in the legitimacy of a document executed in the middle of the night and in the absence of COMIBOL, the Minister of Mines or any representative of the workers.[420] As Mr Lazcano recognized, COMIBOL had been present in all the negotiations since the beginning of the conflict,[421] but was not present the night when the Rosario Agreement was discussed and signed. The agreement's first article falsely states that the Rosario Vein was to be ceded to *Cooperativa 26 de Febrero* "*with the approval of the Corporación Minera de Bolivia*," even though no representative of COMIBOL was a signatory to the agreement.[422] Claimant attempts to grant official status to the agreement by making much of the presence of Mr Isaac Meneses, Vice Minister of Cooperatives and a *cooperativista* himself.[423] Claimant, however, has failed to explain the context of his participation in the meeting during which the Rosario Agreement was executed, and Mr Cordova clearly explained that Mr Meneses' participation was not endorsed or authorized by the Minister.[424]

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416 Proposal from the Government to the *Cabildo* of Colquiri, **R-27**; La Patria, *Mineros asalariados y cooperativistas aceptan rescisión de contrato en Colquiri*, press article of 8 June 2012, **R-223**.

417 As confirmed by Mr Eskdale (Eskdale I, ¶ 91).

418 Agreement between Colquiri SA, Fedecomin, Fencomin, Central Local de Cooperativas Mineras de Colquiri, Cooperativa Minera Collpa Cota, Cooperativa Minera Socavón Inca, and Cooperativa 26 de Febrero of 7 June 2012, **C-35**.

419 Reply on Quantum, ¶ 204.

420 Claimant actually misrepresents the signatories to the Rosario Agreement, as it states "*the Rosario Agreement of 8 June 2012 between Colquiri, the cooperativistas and the Ministry of Mining*" (Reply on Quantum, ¶ 204, emphasis added). The Minister of Mining was not present and had not been invited to participate in the meeting (see Córdova, ¶¶ 64-65).

421 Transcript of the Hearing on the Merits, Day 2 (Spanish), P477:L11-P478:L11 (Lazcano).

422 Agreement between Colquiri SA, Fedecomin, Fencomin, Central Local de Cooperativas Mineras de Colquiri, Cooperativa Minera Collpa Cota, Cooperativa Minera Socavón Inca, and Cooperativa 26 de Febrero of 7 June 2012, **C-35**, Article 1 ("*Con la aprobación de la Corporación Minera de Bolivia*").

423 Reply on the Merits, ¶ 134.

424 Rejoinder on the Merits, ¶ 313; Córdova, ¶¶ 64-65 ("*[H]acia las 11 de la noche de ese 7 de junio, recibí una llamada del Sr. Isaac Meneses, cooperativista muy activo en la política y, para entonces, Viceministro de Cooperativas Mineras. […] El Sr. Meneses me informó que tenía una reunión con los directivos de Sinchi Wayra en La Paz y que mi presencia era requerida urgentemente. Le pregunté si el Señor Ministro estaba al tanto de esta reunión. Ante la respuesta evasiva del Sr. Meneses, decidí no asistir a esta reunión*.") (Unofficial English translation: "*[A]round 11 o'clock on the night of that 7 June, I received a call from Mr Isaac Meneses, a cooperativista very active in politics and, at that time, Vice Minister of Mining Cooperatives. […] Mr Meneses informed me that he had a meeting with the directors of Sinchi Wayra in La Paz and that my presence was urgently required. I asked him whether the Minister was aware of this meeting. Given Mr Meneses' evasive response, I decided not to attend this meeting*").

284. Far from solving the conflict, the Rosario Agreement made it worse, as the workers and the villagers of Colquiri saw the agreement as a betrayal and as a statement that Sinchi Wayra preferred to work with the *cooperativistas* than protecting its own workers.[425] On 8 June 2012, authorities from the *cooperativas*,[426] union leaders and Colquiri authorities confirmed their request that the government revert the Mine Lease.[427] However, and in Claimant's own words, "*[t]he situation turned violent when it became clear that the union workers opposed ceding working areas to the cooperatives and the cooperativistas were not willing to lose what they had just gained through the Rosario Agreement*."[428] This was the obvious outcome of the Rosario Agreement.

285. The Rosario Agreement, Sinchi Wayra's own creation, escalated the conflict to unprecedented levels of violence and created an unsurmountable obstacle to the resolution of the social conflict.[429] On 13 June 2012, around a thousand mining workers blocked roads and required a clear statement from the State in view of the contradictory information published by the press after the Rosario Agreement.[430] The workers' protest evolved into a violent confrontation on 14 and 15 June 2012.[431] The agreement's effects spanned several many months after the main incidents, as it sparked waves of violence in September 2012, which required again the State's intervention. COMIBOL has since secured the peaceful operation of the Mine.[432]

286. The evidence shows that Claimant knowingly mismanaged the social relations at the Mine from the moment it acquired the Mine Lease. At the time of its acquisition, Glencore

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425 Mamani II, ¶ 49.

426 As Mr Cachi explained during the Hearing on the Merits, the Rosario Agreement did not even count with the support of all the members of the *Cooperativa 26 de Febrero*. See Transcript of the Hearing on the Merits, Day 3 (Spanish), P704:L5-P707:L19 (Cachi).

427 Minutes of Agreement between COMIBOL, Federación Sindical de Trabajadores Mineros de Bolivia, Central Obrera Boliviana, Cooperativa 26 de Febrero and authorities of Colquiri of 8 June 2012, **R-345**; Córdova, ¶ 72.

428 Reply on Quantum, footnote 522. See also Minutes of Agreement among Fencomin, Fedecomin, Central Local de Cooperativas Mineras de Colquiri, Cooperativa Minera Collpa Cota, Cooperativa Minera Socavón Inca, Cooperativa 26 de Febrero, The Ministry of Mining and COMIBOL, **C-129**.

429 Romero, ¶¶ 19-21. Minister Romero further explained at the Hearing on the Merits that the Rosario Agreement made it extremely difficult to negotiate with the miners, who believed that neither Sinchi Wayra nor the government had been honest to them during the negotiation process. Transcript of the Hearing on the Merits, Day 3 (Spanish), P874:L8-P875:L11 (Romero).

430 La Patria, Mineros bloquean Conani exigiendo nacionalizar el 100% de mina Colquiri, *press article* of 13 June 2012, **C-134**.

431 "Estalla conflicto minero en Colquiri y se reportan las primeras bajas," *La Patria* of 15 June 2012, **C-139**; La Prensa, *Colquiri se convierte en un campo de batalla*, press article of 15 June 2012, **C-142** ("*Mineros asalariados y afiliados a la cooperativa 26 de Febrero se enfrentaron ayer con dinamita y palos por el control de la mina Colquiri*") (Unofficial English translation: "*Mining employees and affiliates to the cooperativa 26 de Febrero clashed yesterday, [using] dynamite and sticks, over control of the Colquiri mine*").

432 Rejoinder on the Merits, ¶¶ 337-340.

International was aware of the seriousness of Colquiri's social issues. Over the course of time, Glencore witnessed how social tensions increased as it allowed the *cooperativistas* to expand their operations in the Mine, and took no action. Ultimately, the issues culminated in the violent seizure of the Mine and in Glencore's further mismanagement of the negotiations that followed.

287. Claimant's mismanagement of the relations between the workers and *cooperativistas* triggered a chain of events that led to the reversion of the Mine Lease as the only possibility to put an end to the violence. This mismanagement was the decisive factor that caused Claimant's damages. As such, the chain of causation is "*fatally sever[ed]*"[433] and Bolivia should not be held responsible for these damages. Alternatively, were the Tribunal to find that Bolivia was partially responsible for said damages (*quod non*), the Tribunal must also find that Claimant's own conduct was the predominant factor causing Bolivia's response to the social conflict at the Colquiri Mine. As such, Claimant's actions materially and significantly contributed to the damages suffered, which should thus be reduced by, at least, 75%, to reflect Claimant's contributory fault.

3.2.2 Claimant Caused The Reversion Of The Vinto Tin Smelter

288. Claimant has failed to prove that the harm suffered claimed in connection with the reversion of the Vinto Tin Smelter was dominantly caused by Bolivia's alleged unlawful acts. In fact, Glencore International was fully aware of the risks involved in acquiring the Smelter, an asset that had been privatized under irregular circumstances, from fleeing President Sánchez de Lozada. Claimant's own bad business decisions in acquiring the Tin Smelter with full knowledge that it would be reverted to the State prevents it from claiming any compensation. Alternatively, were the Tribunal to find that Bolivia was partially responsible for said harm (*quod non*), the Tribunal must also find that Claimant's own conduct was the predominant factor underlying the reversion. Claimant's actions materially and significantly contributed to the damages sought.

289. As Bolivia has previously explained,[434] the Tin Smelter's privatization was plagued by irregularities. The Tin Smelter was acquired by Allied Deals, a company accused of having non-transparent contracts with COMIBOL[435] and that was later involved in a fraud scandal

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433 *Ioan Micula and others v Romania* (ICSID Case No ARB/05/20) Award of 11 December 2013, **CLA-119**, ¶ 1154.

434 Rejoinder on the Merits, Section 2.4.

435 Rejoinder on the Merits, ¶ 111; Letter from Foreign Trade and Investment Minister to the Executive President of COMIBOL of 18 February 1999, **R-115**.

that led to its bankruptcy.[436] Allied Deals' bid did not comply with the Terms of Reference[437] and, as noted by the Tin Smelter Reversion Decree, both its offer (around US$ 14 million) and the minimum price proposed by Paribas (US$ 10 million) were unduly low, especially considering that the Tin Smelter's inventory was worth over US$ 16 million.[438] These irregularities prompted multiple calls for investigation, resignation of the public officials involved in the privatization and for the reversion of the asset.[439]

290. Following the irregular privatization and Allied Deal's bankruptcy, the Tin Smelter was acquired by Comsur, then controlled by Sánchez de Lozada, for some US$ 6 or 7 million.[440] New calls for reversion ensued, all based on the irregularities during the privatization process.[441] After Sánchez de Lozada resigned and fled Bolivia in 2003, under the accusation of having committed genocide and multiple violations of individual rights and guarantees,[442] it became clearer that the State might attend to the calls for reversion. [redacted]

436 By then, the company had changed its name to RBG Resources plc. Rejoinder on the Merits, ¶¶ 119-120.

437 Allied Deals' bid provided no evidence of its allegedly sterling environmental record or that its turnover derived from gross sales from the commercialization of ore, concentrates or metals in general, being in violation of Article 2 of the Terms of Reference. Rejoinder on the Merits, ¶¶ 111, 115; Statement of Defence, footnote 78.

438 Rejoinder on the Merits, ¶¶ 111, 118; Statement of Defence, ¶ 74.

439 Rejoinder on the Merits, ¶ 111; Statement of Defence, ¶¶ 78-81; Statement of the Oruro Civic Committee, **R-122**; Letter from the President of the Oruro Civic Committee to the *Contralor General de la República* of 21 February 2001, **R-123**; Letter from Representative Pedro Rubín de Celis to the *Contralor General de la República* of 10 May 2001, **R-124**; Letter from the Oruro Central Obrera to President Banzer Suárez of 23 May 2001, **R-126**.

440 Comsur managed to pay an even lower price for the Tin Smelter – around US$ 6 million. Rejoinder on the Merits, ¶ 125; La Patria, *Liquidador de Allied Deals pidió $US 6 millones por Vinto y Huanuni*, press article of 2 June 2002, **R-149**; La Prensa, *Comsur será operadora de Vinto, es dueña del 51% de las acciones*, press article of 6 June 2002, **R-150**. [redacted] The extreme variation in the price paid for the Tin Smelter also intrigued the Tribunal. Transcript of the Hearing on the Merits, Day 1 (English), P274:L2-25 (Eskdale) ("*PRESIDENT RAMÍREZ HERNÁNDEZ:* [redacted] *You are obtaining a series of Assets, and I'm moving back when the operation was made and when you originally acquired those Assets. And just specifically to the Tin Smelter, when you were doing your due diligence and you realized that that was acquired for $14 million, approximately, but then was acquired for $6 million, and you see an Asset that has a value of $50-something million, which is roughly 10 times more, wouldn't that—didn't that ring any bells on your side? THE WITNESS: No, I think-- PRESIDENT RAMÍREZ HERNÁNDEZ: I mean, because, I mean, I know you want to make money, and that's business transaction, and your thing, but you are acquiring something that has a value of 10 times more than what it was originally required by the person you acquired from. So, wouldn't that--I mean, wouldn't a reasonable person, as lawyers, Look at this, this is too low, too cheap. I mean, I'm just-- THE WITNESS: It's a very fair question, and within the context of--I think it's important to explain the context of what the mining industry is and the volatility that exists in there very broadly*") (emphasis added).

441 Some of these calls were made by members of the Bolivian Congress. Rejoinder on the Merits, ¶¶ 128, 171; Statement of Defence, ¶ 88; Letter from the *Federación Regional de Cooperativas Mineras de Huanuni* to President Quiroga Ramírez of 20 May 2002, **R-142**; *DDHH pide que el Estado intervenga, Brigada Parlamentaria pide preservar fuentes de trabajo*, press article, **R-137**; La Patria, *Cooperativistas amenazan con la toma de la empresa*, press article, **R-139**.

442 Rejoinder on the Merits, ¶¶ 152-154; First Request for the Opening of Criminal Responsibility Proceedings Against Sánchez de Lozada and Others from National Representatives of 20 October 2003, **R-307**.

443 [redacted]

291. Glencore International was perfectly aware of the risks inherent in the acquisition of the Assets and of the measures the Government could take against them, as Glencore's acquisition of the Assets was carried out in haste[444] [redacted] [445] Moreover, Glencore's internal documents pointed out that

> *[T]here is clearly a risk that Goni's personal issues might have a bearing on the [Comsur] group's sale. We need to be extremely cautious both in terms of the warranties and indemnities given in any share purchase agreement and also in the handling and presentation of the transition in country.*[446]

292. Mr Eskdale confirmed at the Hearing on the Merits that Glencore was fully aware that it was purchasing the Assets from former President Sánchez de Lozada,[447] that he had fled Bolivia in October 2003 due to popular unrest[448] and that at the time of the acquisition the Bolivian Congress was preparing legal proceedings against him.[449] Glencore International knew that "*Mr. Sánchez de Lozada was a major shareholder, the major shareholder, of the Company that [it was] considering buying. It's a fact that he had significant issues, personal issues, in Bolivia, that he had left office under difficult circumstances*."[450]

293. Glencore International's actions after the acquisition also demonstrate that it was fully aware of the risks of its business decision.

294. [redacted] [451] [redacted] [452] [redacted]

[redacted]

444 Transcript of the Hearing on the Merits, Day 1 (English), P211:L7-12 (Eskdale) ("*Q. Very well, but you agree with me that the Seller wanted to effect the transaction expeditiously, and that was a key attribute for them to engage in discussions with Glencore International, was it not? A. It was a key attribute as was the dollar number that we offered*").

445 Rejoinder on the Merits, ¶ 164; [redacted]

446 Glencore inter office correspondence from Mr Eskdale to Mr Strothotte and Mr Glasenberg of 20 October 2004, **C-196**, p. 5 (emphasis added).

447 Transcript of the Hearing on the Merits, Day 1 (English), P158:L6-P159:L2 (Eskdale).

448 Transcript of the Hearing on the Merits, Day 1 (English), P166:L4-8; P194:L21-P195:L4 (Eskdale).

449 Transcript of the Hearing on the Merits, Day 1 (English), P195:L5-9 (Eskdale).

450 Transcript of the Hearing on the Merits, Day 1 (English), P197:L15-20 (Eskdale).

451 [redacted]

452 [redacted]

295. *Second*, Glencore International repeatedly failed to respond to the Bolivian authorities' requests to provide more information on its acquisition.[453] A formal request for information, sent in January 2005,[454] was responded only in 2007.[455] In the meantime, in February 2005, Glencore International represented to the State that Comsur's shares had not been transferred to any natural person or company, omitting the fact that Colquiri's shareholders had changed.[456] All modifications in the ownership of Colquiri, the lessee of the Mine Lease, had to be notified and previously authorized by COMIBOL; thus Glencore's acquisition was in breach of the terms of said Mine Lease.[457] In fact, Claimant has been reluctant to disclose information on its acquisition of the Assets even in these arbitration proceedings.[458]

296. Claimant attempts to minimize these issues by stating that "*no authority had (or has) found irregularities in the privatization process*" and that prior to Claimant's acquisition, the Tin Smelter "*had enjoyed several years of uninterrupted operations*."[459] *First*, this argument does not address the fact that the irregularities were perceived by Glencore International at the time of the acquisition, and that the company took measures to address the risks it had identified in structuring the transaction. *Second*, it is unsurprising that the Tin Smelter's operations were undisturbed for years, as it was acquired (amid bankruptcy proceedings and a fraud scandal) by Sánchez de Lozada two years after it was first privatized and two months before he assumed the Presidency for the second term.[460] This says nothing as to the risk of reversion after Sánchez de Lozada had to flee the country.

297. Claimant further argues that "*Bolivia's Vice Minister of Mining not only failed to mention any purported irregularities […] but even encouraged Glencore to acquire Vinto and Colquiri*."[461] Claimant has insisted on this baseless allegation since its Statement of Claim,[462] but has failed to put forth any evidence that such encouragement ever took place.[463] Mr Eskdale has testified

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453 Rejoinder on the Merits, ¶¶ 188-192.

454 Letter from the Vice Minister of Mining to Glencore of 17 January 2005, **C-63**.

455 Reply on the Merits, ¶ 83; Letter from Pestalozzi Lachenal Patry (Mr Pestalozzi) to Senate of Bolivia (Ms Velásquez) of 10 January 2007, **C-225**.

456 Letter from Comsur (Sinchi Wayra) to COMIBOL of 17 February 2005, **R-189**.

457 As Bolivia has explained before, Mr Eskdale acknowledges this obligation. Eskdale II, ¶ 12.

458 Rejoinder on the Merits, ¶ 192 ("*Tellingly, with the Statement of Claim, [Claimant] submitted as proof of the investment share certificates and share registries, but no documents regarding the transaction. Further, Claimant resisted producing transaction-related documents in disclosure, and only proceeded to do so once the Tribunal had ordered it.*").

459 Reply on Quantum, ¶ 206.

460 Rejoinder on the Merits, ¶¶ 120-124.

461 Reply on Quantum, ¶ 206.

462 Statement of Claim, ¶ 35; Reply on the Merits, ¶ 204.

463 Claimant misrepresents a letter from the Vice Minister of Mining in which the Government conveyed to Glencore International that it was considering modifications to the fiscal regime applicable to the mining sector and to the Bolivar,

to the contents of an alleged meeting between Bolivian authorities and Glencore's representatives in February 2005, affirming that Bolivia would have encouraged Glencore to invest in the country.[464] As Mr Eskdale admitted earlier, and confirmed during the Hearing on the Merits, he did not attend the purported meeting[465] and there is no documentary evidence of its occurrence or its contents.[466] In any event, this alleged meeting would have taken place in February 2005, therefore *after* Glencore International had already committed to acquiring the Assets.[467]

298. Claimant was certainly aware that the Tin Smelter was tainted by the irregular conditions of its privatization since the acquisition of the Assets from President Sánchez de Lozada, who had fled Bolivia just a few months before negotiations started. Similarly to *RosInvestCo*, Glencore International also "*made a speculative investment*" in the Tin Smelter, having "*'priced in' the likelihood*" that these irregularities could trigger Bolivia's reaction, and considering that, [redacted] paying that purchase price for Vinto was worth the risk.[468] As the *RosInvestCo* tribunal did, this Tribunal too "*must take this into account when awarding damages (if any).*"[469]

299. Claimant's own bad business decision to acquire an asset whose privatisation was tainted by irregularities was the very factor that caused Claimant's damages following the Tin Smelter's reversion, or that, at the very least, materially and significantly contributed to said damages. Thus, the Tribunal must find either that the causal chain has been fatally severed and not award any compensation for Vinto, or reduce any compensation by at least 50%, to reflect Claimant's contributory fault.

3.2.3 Claimant Caused The Reversion Of The Antimony Smelter

300. Claimant has failed to prove that the damages claimed in connection with the reversion of the Antimony Smelter were dominantly caused by Bolivia's alleged unlawful acts. In fact, Glencore's unwillingness to make use of the Antimony Smelter and turn it into a productive

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Porco and Colquiri lease agreements. Rejoinder on the Merits, ¶ 180; Statement of Defence, ¶¶ 133-134; Letter from the Vice Minister of Mining to Glencore of 17 January 2005, **C-63**.

464 Eskdale I, ¶ 18; Eskdale II, ¶¶ 11-12.

465 Transcript of the Hearing on the Merits, Day 1 (English), P236:L20-25 (Eskdale).

466 Rejoinder on the Merits, ¶ 181.

467 By early February 2005, Glencore International had acquired 99.95% of Comsur. Rejoinder on the Merits, ¶ 182; Reply on the Merits, ¶¶ 60, 63.

468 *RosInvestCo UK Ltd. v. The Russian Federation*, SCC Case No. V079/2005, Award of 12 September 2010, **RLA-121**, ¶¶ 668, 665.

469 *RosInvestCo UK Ltd. v. The Russian Federation*, SCC Case No. V079/2005, Award of 12 September 2010, **RLA-121**, ¶ 668.

asset (*per* the Antimony Smelter's contract) was the triggering and decisive factor that led the State to revert the Antimony Smelter in May 2010. As such, Bolivia should not be ordered to pay compensation. Alternatively, were the Tribunal to find that Bolivia was partially responsible for said damages (*quod non*), the Tribunal must also find that Claimant's own conduct was the predominant factor that led to the reversion. As such, Claimant's actions materially and significantly contributed to the damages suffered.

301. Despite the fact that the privatization of mining assets in Bolivia had been carried out with the goal of increasing "*la producción, las exportaciones, el empleo y la productividad*,"[470] Comsur and Sinchi Wayra never reactivated the Antimony Smelter. It is undisputed that, besides using it as a storage facility or a source of spare parts, Claimant never attempted to use the Smelter in a meaningful way.[471]

302. Claimant, however, had an obligation to operate the Antimony Smelter. As Bolivia has explained before,[472] Article 2.7 of the Antimony Smelter contract established that

> *El PLIEGO establece en su numeral 1.4 que tiene por objeto la transferencia a título oneroso de la FUNDICIÓN, a favor de una empresa especializada con capacidad económica, financiera y técnica, que permita el ingreso de capital, tecnología, prácticas comerciales y de gestión privada, posibilitando a la FUNDICIÓN continuar la producción constituyéndose en una fuente de generación de empleo y tributos, en apoyo a la actividad minera de explotación y concentración de antimonio u otros minerales en el país.*[473]

303. In 2009, Bolivia enacted a new Constitution, pursuant to which the State is "*responsable de las riquezas mineralógicas que se encuentren en el suelo y subsuelo cualquiera sea su origen y su aplicación será regulada por la ley*" and "*ejercerá control y fiscalización en toda la cadena productiva minera*."[474] The new Constitution, as Bolivia has previously explained,

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470 Supreme Decree No. 23.991 of 10 April 1995, **R-100**, Article 2(c) (Unofficial English translation: "*[to increase] production, exports, employment and productivity*").

471 Rejoinder on the Merits, ¶ 237.

472 Rejoinder on the Merits, Section 2.7.2.

473 Notarization of the sale and purchase agreement of the Vinto Antimony Smelter between the Ministry of External Trade and Investment, Comibol, Empresa Minera Colquiri and Compañía Minera Del Sur SA of 11 January 2002, **C-9**, Article 2.7 (Unofficial English translation: "*The TERMS OF REFERENCE establish in their article 1.4 that its purpose is the transfer-for-consideration of the SMELTER, in favor of a specialized company with economic, financial and technical capacity which allows the introduction of capital, technology, commercial practices and private management, enabling the SMELTER to continue production, becoming a source of employment and tax generation, in support of the mining activities of exploitation and refining of antimony or other minerals in the country*") (emphasis added).

474 Constitution of Bolivia of 7 February 2009, **C-95**, Article 369 (Unofficial translation: "*responsible for the mineral resources located in the soil and sub-soil irrespective of their origin and its application will be regulated by law […and] will control and audit the entirety of the mining production chain*").

re-established the State as an active player in the mining sector, attributing to the authorities the duty to oversee the mining production chain.[475]

304. Claimant could have adapted the facilities of the Antimony Smelter to process tin (as the State did after the reversion) or to develop any other activity related to the rich Bolivian metallurgical industry. The Antimony Smelter contract did not demand that the Smelter continue to be used to process antimony. It only required that the plant be kept in production, generating jobs and keeping with its fiscal duties, thus supporting the mining industry in Bolivia.[476] Claimant chose not to do so.

305. Given that the inactivity of the Antimony Smelter was unacceptable under both the principles of the privatization and the constitutional framework (in both the previous and the new Constitutions), on 1 May 2010, Bolivia issued a decree reverting the Antimony Smelter, noting the Asset's inactive status despite the acquirer's commitments to reactivate it.[477]

306. The *Occidental* tribunal, quoted by Claimant,[478] found that the violation of a contractual framework "*contributed in a material way to the prejudice which [the claimants] subsequently suffered*,"[479] and consequently determined that responsibility for the damages incurred had to be apportioned between the parties.[480] Accordingly, the Tribunal should acknowledge Claimant's violation of its contractual obligation to keep the Smelter in production as the decisive factor that led to the reversion of the Antimony Smelter.

307. Claimant was aware of the contractual obligation to keep the plant in production, but chose not to do so. In reality, Glencore International was not willing to invest in the Assets – much

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475 Rejoinder on the Merits, ¶ 238.

476 Rejoinder on the Merits, ¶ 250.

477 Supreme Decree No 499 of 1 May 2010, **C-26**, recitals ("*Que en los últimos años se evidenció la inactividad productiva de la Planta Metalúrgica Vinto Antimonio, así como su desmantelamiento, no obstante haberse estipulado en el pliego de condiciones las obligaciones de invertir y fortalecer la Empresa Metalúrgica Vinto Antimonio con capacidad económica, financiera y técnica, que permita el ingreso de capital, tecnología, prácticas comerciales y de gestión privada, posibilitando a la Fundición continuar la producción, constituyéndose en una fuente de generación de empleo, tributos y de externalidades, en apoyo a la actividad minera de explotación y concentración de antimonio en el país*") (Unofficial English translation: "*In recent years, the productive inactivity of the Metallurgical Company Vinto Antimonio became obvious, as well as its dismantling, notwithstanding that the terms of reference provided for the obligation to invest in and reinforce the Metallurgical Company Vinto Antimonio with economic, financial, and technical capacity, that would allow the inflow of capital, technology, commercial practices and private management, permitting the Smelter to continue production, becoming a source for the generation of employment and tax, in support of the mining activity of exploitation and concentration of antimony in the country*").

478 Reply on Quantum, ¶ 198.

479 *Occidental Petroleum Corporation and Occidental Exploration and Production Company v Republic of Ecuador* (ICSID Case No ARB/06/11) Award, **CLA-254**, ¶ 680. See also *Occidental Petroleum Corporation and Occidental Exploration and Production Company v Republic of Ecuador* (ICSID Case No ARB/06/11) Award, **CLA-254**, ¶¶ 672-673.

480 *Occidental Petroleum Corporation and Occidental Exploration and Production Company v Republic of Ecuador* (ICSID Case No ARB/06/11) Award, **CLA-254**, ¶ 687.

less in the Antimony Smelter. As such, Claimant's own conduct – its decision not to activate the plant – was the triggering and decisive factor for the Antimony Smelter's reversion, or, at least, it was the predominant triggering factor for the reversion, materially and significantly contributing to the damages sought, which should thus be reduced by 75%, to reflect Claimant's contributory fault.

4. THE REPLY CONFIRMS THAT CLAIMANT'S VALUATIONS ARE FLAWED AND GROSSLY INFLATED

308. Claimant's updated valuations of the Mine Lease, the Tin Smelter, the Antimony Smelter and the Tin Stock remain as flawed and inflated as the valuations submitted with its Statement of Claim. Before addressing the most recent flaws in detail, Bolivia shall make five preliminary comments:

309. *First*, Glencore attempts to confirm the reasonability of its forecasts as of the valuation date (*e.g.*, regarding resources and reserves, production, head grades and recovery rates, etc.) by relying on *ex post* data, *i.e.*, using hindsight. This is wrong. As explained by the *Koch* and *Murphy* tribunals:

> *[a]s to the issue of the period from October 2010 to February 2012, the Tribunal has found in favour of KNI's case, as decided in Part VII above, in regard to liability. As to the cut-off date for factual assumptions, the Tribunal likewise decides against the Respondent's use of factors occurring after 10 October (or 30 September) 2010 derived only with the benefit of hindsight, particularly in regard to recent developments of shale gas production in the USA, the increased supply of ammonia and urea in the world market and differential shipping costs. These are ex-post factors irrelevant to assessing compensation at the relevant date required under the Treaty (30 September or 10 October 2010).*[481]
>
> *[u]nder customary international law, if an investor loses ownership or control of its primary investment due to the breach by a host state of its international law obligations, the commonly accepted standard for calculating damages is to appraise the fair market value of the lost investment at the time it was lost, without taking into account subsequent events.*[482]

310. Colquiri's post-2012 operations (under the State's control) are substantially different from, and not comparable to, Colquiri's operations prior to the reversion. For instance, post-reversion, Colquiri almost tripled its number of employees (from 458 employees in 2011 to 1,249 employees by 2014[483]), invested US $ 3.4 M to carry out a large and ambitious

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481 *Koch Minerals Sárl and Koch Nitrogen International Sárl v The Bolivarian Republic of Venezuela* (ICSID Case No ARB/11/19) Award of 30 October 2017, **CLA-228**, ¶¶ 9.225 (emphasis added).

482 *Murphy Exploration and Production Company International v. Republic of Ecuador [II]*, PCA Case No. 2012-16, Partial Final Award, **RLA-99**, ¶ 482 (emphasis added).

483 Quadrant II, footnote 51.

exploration program,[484] invested 3.3 M euros to purchase the Zitrón winze (to replace the obsolete San José winze),[485] among others, all of which allowed Colquiri to delineate new resources and reserves and to increase its production. As of the reversion date, Glencore had not contemplated any of these investments and had no intention of making them, as confirmed by Glencore's history of underinvestment in Colquiri.[486] Glencore asks the Tribunal to look at the post-reversion data while ignoring the investments that made such data possible. If anything, the fact that Glencore had to resort to *ex post* data to somehow support its valuation while ignoring the necessary investments made only serves to highlight how unduly inflated Glencore's valuations are.

311. In any event, *ex post* data does not support Glencore's exaggerated forecasts for, at least, three reasons:

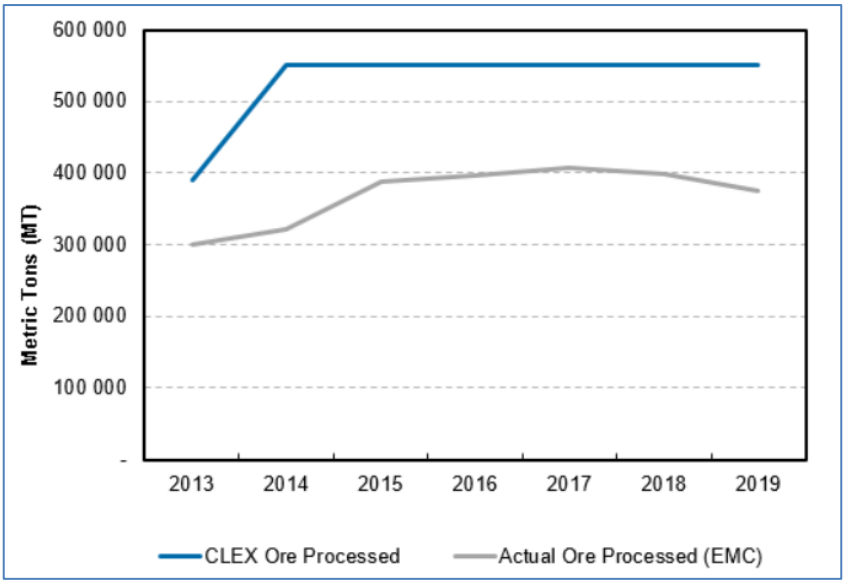
312. One, despite the investments made by Colquiri *ex post*, the Mine's ore processing rate is still well below that forecasted by Glencore. Indeed, during the 2013-2019 period, Colquiri processed an annual average of 369,960 MT, *i.e.*, 157,726 MT less than the annual average of 527,686 MT assumed by Claimant's valuation for the same period:[487]

484 Compañía Minera Colquiri Summary of Investment Projects 2013- Nov 2017, **R-38**.

485 [redacted] Compañía Minera Colquiri Summary of Investment Projects 2013- Nov 2017, **R-38**; Administrative Contract for the Acquisition of the Zitron Winch for the San José Winze of 11 November 2014, **R-449**, and Technical Complementary Report for the Zitron Winch, INF/TEC-03/014 of 23 October 2014, **R-450**.

486 [redacted]

487 Graph prepared by Counsel with data from 2020 RPA Model, January, 2020, **RPA-55 Bis**, tab "Colquiri Mine," row 52; Summary of Monthly Metallurgical Balance, Certificates of Plant Operation Chemical Grades, and Monthly Reports of Minerals Movement, **R-41**, pp. 4-7 of the pdf; Colquiri Executive Operations Report of June 2017, **R-416**, p. 6 of the pdf; Colquiri Executive Operations Report of December 2017, **R-417**, p. 8 of the pdf; Colquiri Executive Operations Report of December 2018, **R-451**, p. 14 of the pdf; Colquiri Executive Operations Report of December 2019, **R-452**, p. 11 of the pdf.



313. The moderate increase in Colquiri's *ex post* ore processing levels – despite the large investments made by the State – is evidence of the Mine's bottlenecks, which Bolivia already detailed in Statement of Defence[488] [redacted][489] and Claimant insists in ignoring.[490] Because the Mine feeds the Plant, the Plant's ore processing levels are dependent on the Mine's extraction levels, which are limited by these bottlenecks. [redacted]

[redacted][491]

314. The Mine's bottlenecks are discussed, in more detail, in Section 4.1.3 below.

315. Two, State-owned Colquiri's US $ 3.4 M investment in exploration was necessary to delineate new resources and reserves. The additional data generated by this exploration campaign was

488 Statement of Defence, Section 7.3.4.

489 [redacted]

490 After the reversion, as a result of Colquiri's history of underinvestment under Glencore's tenure, the State had to make substantial investments to maintain or replace the machinery necessary for extraction. [redacted]

491 [redacted]

not available as of the valuation date. As explained by SRK, as of that date, "*[…] there ha[d] been little to no exploration work […]*."[492] This is consistent with Glencore's history of underinvestment in Colquiri, and with Glencore's assignment of the Rosario vein, in early June 2012, to the *cooperativistas*.[493] Therefore, Glencore cannot rely on the *ex post* reality to confirm the reasonability of its estimates and/or forecasts as of the valuation date (*i.e.*, there was no evidence as of the valuation date to support Claimant's or its experts' forecasts).

316. Three, *ex post* data confirms that many of the assumptions underlying Glencore's valuation are simply wrong.

317. For instance, as explained in Section 4.1.3.2 below, (i) Glencore assumes that the construction of the Main Ramp would have only taken 15 months[494] but, in reality, it has taken several years,[495] (ii) Glencore assumes that the construction of the Main Ramp would cost only US $ 4.2 M[496] when, in reality, it has cost triple, US $ 11.6 M,[497] and (iii) Glencore assumes that, by 2014, once the Main Ramp began operating, the Mine would reach an annual extraction rate of 550,579 MT,[498] but, in reality, to date, after 3 years operating the Main Ramp, the Mine's extraction levels average 400,000 MT per year.[499]

318. *Second*, Claimant's experts have had to revise their analyses and conclusions in several important aspects as a result of Bolivia's experts' demonstration. Still, however, Claimant's experts have failed to put forth a truly independent and honest valuation of the Assets. To put a few examples in relation to Claimant's valuation of the Mine Lease:

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492 SRK I, ¶ 43 (emphasis added).

493 Agreement between Colquiri SA, Fedecomin, Fencomin, Central Local de Cooperativas Mineras de Colquiri, Cooperativa Minera Collpa Cota, Cooperativa Minera Socavón Inca, and Cooperativa 26 de Febrero of 7 June 2012, **C-35**.

494 Lazcano III, footnote 56.

495 [redacted]

496 Claimant's valuation considers US $ 5'915,000 as expansion CAPEX for "Mine equipment and development". See 2020 RPA Model, January, 2020, **RPA-55 Bis**, tab "Capex," rows 18 and 26. While RPA does not indicate how much of this would be for the construction of the Main Ramp, contemporaneous documents suggest Glencore considered that amount to be US $ 4'275,101. See Colquiri S.A., Mine Expansion Project, GB013681, **R-453**, page 2.

497 Compañía Minera Colquiri Summary of Investment Projects 2013- Nov 2017, **R-38**.

498 RPA II, ¶ 20 a).

499 Colquiri extracted 424,035 MT in 2017, 392,408 MT in 2018 and 385,670 MT in 2019. See Colquiri Executive Operations Report of June 2017, **R-416**, p. 6 of the pdf; Colquiri Executive Operations Report of December 2017, **R-417**, p. 8 of the pdf; Colquiri Executive Operations Report of December 2018, **R-451**, p. 14 of the pdf; Colquiri Executive Operations Report of December 2019, **R-452**, p. 11 of the pdf.

- RPA now includes an additional US $ 5.9 M in CAPEX to increase the height and holding capacity of the pre-existing tailings dam, and to build a new tailings dam;[500]

- RPA accepts that old tailings grades could not remain constant, and states that "*in response to SRK's criticism, we made an adjustment to our plan to allow for grade variability […] in order to provide a more precise estimate*;"[501] and

- Compass Lexecon now includes the impact of tax receivables in its working capital calculation, which it had previously ignored.[502]

319. This confirms how unreasonable Claimant's experts' assumptions were (and, in fact, continue to be, as discussed further below).

320. *Third*, some of the key assumptions of Glencore's valuations rely solely on the testimony of Mr Lazcano, who lacks any credibility. Mr Lazcano's third witness statement includes several material corrections, which he was forced to make as a result of Bolivia's evidence, including clear inconsistencies we had identified between his testimony and contemporaneous documents. Among others, Mr Lazcano made the following material corrections to his prior testimony:

- While, in his first witness statement, Mr Lazcano had stated that the Main Ramp <u>was necessary</u> to reach Claimant's projected extraction level for 2013 (390,000 MT),[503] in his third witness statement Mr Lazcano now claims that the Main Ramp <u>was not necessary</u> and that the same extraction levels could be achieved solely using the Victoria winze.[504]

  Mr Lazcano's correction is not innocent. The change in his testimony is explained by the fact that, per Claimant's own case, the Main Ramp would have not been built by early 2013, thus making it impossible to reach the increased extraction levels forecasted by Claimant that year. In a DCF valuation, the most important cash flows

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500 RPA II, ¶ 180 ("*RPA has added this capital expenditure of US$5.9 million (US$3.9 million for raise to 4,000 masl and US$2.0 million for TSF #4) to its revised cash flow model*").

501 RPA II, ¶¶ 11.a and 148.

502 Compass Lexecon II, ¶ 99 ("*We adjusted our working capital projection to include tax receivables assumed at 100 days of operating costs*").

503 Lazcano I, ¶ 27 ("*[e]l objetivo luego era llegar en 2013 a extraer 390.000 toneladas al año mediante la construcción de una rampa principal*") (emphasis added) (unofficial translation: "*[the] objective was to reach, in 2013, a level of 390,000 tonnes per year through the construction of a main ramp*").

504 Lazcano III, ¶ 34 ("*para alcanzar estos niveles de extracción [in 2012 and 2013] no era necesario construir la Rampa Principal, sino que la infraestructura que ya teníamos en la Mina de Colquiri era suficiente*") (emphasis added) (unofficial translation: "*construction of the Main Ramp was not necessary to attain those extraction levels [in 2012 and 2013]; the infrastructure we already had at the Colquiri Mine was actually sufficient*").

are those closer in time to the valuation date (due to the greater impact of discounting cash flows further into the future), so Claimant had to downplay the importance of the Main Ramp so as to continue frontloading its DCF model with very large cash flows soon after the valuation date.

- In his first witness statement, Mr Lazcano had stated that, as of the reversion date, Sinchi Wayra had already agreed with the Hampaturi community the purchase terms for the acquisition of the community's land where the Concentrator Plant would be expanded.[505] In his third witness statement, Mr Lazcano now states that these lands did not belong to the Hampaturi community (but to Comibol), and that they were vacant.[506] This correction is not minor, as it confirms Mr Lazcano made a false statement when he wrote that the land purchase had already been agreed with the Hampaturi community; and

- In his first witness statement, Mr Lazcano had stated that, as of the reversion date, Sinchi Wayra had already agreed the purchase terms of the land where the new tailings dam would be built.[507] In his third witness statement, Mr Lazcano also changes his testimony in this respect and now states that Sinchi Wayra would not purchase the land and, instead, would only have to acquire easement rights (of course, at a lower cost).[508]

321. *Fourth*, aware of the weaknesses of its main case (which relies on a simple piece of paper it calls the Triennial Plan), Glencore's economic expert, Compass Lexecon, has submitted with

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505 Lazcano I, ¶ 24 ("*Para el año 2012, […] se habían convenido los términos de la compra de terrenos a la comunidad Hampaturi para las obras en la superficie […]*") (unofficial translation: "*By 2012, […] we had agreed on the terms of purchase of lands from the Hampaturi community to be used for surface works […]*").

506 Lazcano III, ¶ 53 ("*[…] durante la preparación de esta declaración pude confirmar que en realidad lo que hicimos fue utilizar terrenos vacíos donde antes estaban almacenados equipos de Comibol y que confundí con terrenos de la comunidad Hampaturi*") (unofficial translation: "*[…] in preparing this statement, I was able to confirm that what we actually did was to use empty land where Comibol equipment was previously stored, an area I mistakenly thought was Hampaturi community's land*").

507 Lazcano I, ¶ 34 ("*En el 2012 ya habíamos identificado los terrenos donde se construiría el nuevo dique con capacidad de 5.000 toneladas por día, y habíamos convenido los términos de su compra con el dueño de los mismos*") (unofficial translation: "*By 2012, we had already identified the terrains where the new dam was going to be built, with a capacity of 5,000 tonnes per day, and we had agreed on the terms of the purchase with the owners of the terrains*").

508 Lazcano III, footnote 102 ("*En mi primera declaración testimonial dije que recordaba que ya habíamos convenido los términos de la 'compra' de los terrenos con el dueño de los mismos, pero tras revisar los documentos contemporáneos que me hicieron llegar los abogados de Glencore Bermuda pude confirmar que en realidad acordamos los términos de una 'servidumbre minera'*") (unofficial translation: "*In my First Witness Statement, I stated that I recalled that we had already agreed on the terms of the 'purchase' of the lands with their owner, but, after reviewing the documents of that time that Glencore Bermuda's counsel provided me with, I was able to confirm that, actually, we agreed on the terms of a 'mining easement'*").

its second report an alternative valuation of the Mine Lease based on the March 2012 Investment Plan.[509]

322. As explained in Section 2.3.2.1 above, the March 2012 Investment Plan (prepared 8 months after the Triennial Plan) confirms that the latter was never approved nor implemented by Glencore. However, it would also be wrong to assume that Glencore would have implemented the March 2012 Investment Plan but for the reversion and, therefore, that the Mine Lease should be valued based on this Plan. This is the case for, at least, two reasons:

323. One, during disclosure, Bolivia requested Glencore (and the Tribunal ordered Glencore) to produce (i) "*[t]he Documents supporting the data and statements in the March 2012 Investment Plan*",[510] and (ii) "*[t]he Documents and Communications […] that refer to the approval and/or budgeting for and/or implementation of the March 2012 Investment Plan*."[511] Glencore's disclosure was limited to a single Excel spreadsheet containing a few projections[512], thus confirming that it had not approved the March 2012 Investment Plan and that it was not planning to implement it any time soon.

324. Two, as explained above, Glencore's tenure at Colquiri is marked by the lack of investments. It is simply unrealistic to assume that Glencore would have all of a sudden implemented a Plan that required even larger investments than those assumed by the Triennial Plan.[513] This is further confirmed by Glencore's assignment of the Rosario vein to the *cooperativistas* before the valuation date.[514]

325. *Fifth*, as it relates to the Tin Smelter, Claimant puts forth unrealistic production forecasts of 14,000 tonnes of tin ingots per year starting in 2008,[515] *i.e.*, a 21.8% surge in the Tin Smelter's production of tin ingots with respect to the 11,400 tonnes per year it produced in 2005 and 2006. Despite bearing the burden of proving how it would attain those levels, Claimant simply posits that the Tin Smelter's concentrate processing capacity would increase, according to

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509 Compass Lexecon II, Appendix C, ¶ 159: "*In conclusion, if we were to properly run a valuation scenario using the assumptions and forecasts of the March 2012 Investment Plan instead of the Triennial Plan, our valuation of Colquiri Mine would be reduced by US$ 80.0 million, from US$ 387.7 million to US$ 307.7 million, as shown in Table 15 below*") (emphasis added).

510 Annex 2 to Procedural Order No. 9 of 30 September 2019, Request No. 5, p. 28.

511 Annex 2 to Procedural Order No. 9 of 30 September 2019, Request No. 6, p. 34.

512 Sinchi Wayra S.A., Investments, March 2012, GB013973, **R-454**.

513 As explained by Quadrant, "*the March 2012 Investment Plan called for US$ 12.3 million more in expansion CAPEX than the Triennial Plan with lower expected production*." Quadrant II, ¶ 215.

514 Agreement between Colquiri SA, Fedecomin, Fencomin, Central Local de Cooperativas Mineras de Colquiri, Cooperativa Minera Collpa Cota, Cooperativa Minera Socavón Inca, and Cooperativa 26 de Febrero of 7 June 2012, **C-35**.

515 Reply on Quantum, ¶ 123.

RPA's estimates, from some 25,000 dry metric tonnes ("**DMT**") of tin concentrates processed per year to 30,000 DMT per year, but addressing the condition of the Tin Smelter's furnaces altogether and the fact that the available units did not have the capacity to achieve such astronomical processing and production levels, as further discussed below. Instead, Claimant posits that tin ingot production could be magically increased "*without expanding the existing infrastructure*."[516] Yet, Claimant's production of tin ingots remained within the same levels as prior years (i.e., around 11,400 tonnes), hence proving that it was not possible to increase production with the existing units at the Tin Smelter.

326. The Reply confirms that Claimant's updated valuations of the Mine Lease (**Section 4.1**), the Tin Smelter (**Section 4.2**), the Antimony Smelter (**Section 4.3**) and the Tin Stock (**Section 4.4**) are flawed and unreliable, and should be disregarded. Equally wrong is the discount rate used by Compass Lexecon to estimate the net present value of future cash flows, which is unrealistically low so as to inflate damages even more (**Section 4.5**).

4.1 The Reply Confirms That Claimant's Updated Valuation Of The Mine Lease Is Flawed And Grossly Inflated

327. *In limine*, Glencore attempts to diminish the importance of the site visit made by Dr Neal Rigby, Bolivia's mining expert, to the Mine between October 8 and 12, 2017,[517] to better understand its operations and prospects. According to Glencore, that site visit would be "*irrelevant [i]n light of the exhaustive historical information and supporting documentation available about the operations of the Colquiri Mine*."[518]

328. Glencore's statement is, to say the least, surprising, considering that its own witness – Mr Eskdale – and several Glencore technical teams made visits to Colquiri before Glencore purchased the Assets.[519] Mr Eskdale states in his third witness statement that these visits "*helped assess the condition and commercial viability of the Mine*,"[520] and Glencore's contemporaneous documents confirm that it "*valued the company based on visits made to the operations and a number of detailed discussions with management*."[521] Therefore, there can be no doubt that the site visit made by Dr Rigby and his discussions with Colquiri's

516 Reply on Quantum, ¶ 126.

517 SRK I, ¶ 22.

518 Reply on Quantum, footnote 203.

519 Eskdale III, ¶¶ 7-8.

520 Eskdale III, ¶ 12.

521 Glencore inter office correspondence from Mr Eskdale to Mr Strothotte and Mr Glasenberg of 20 October 2004, **C-196**, p. 2.

management are relevant to assess the Mine's prospects and value. RPA made no such visit nor held such discussions.

329. Glencore claims US $ 387.7 million as the FMV of the Mine Lease as of 29 May 2012[522], with the Old Tailings Project amounting to 26%, that is, approximately US $ 100 million.

330. In the next sub-sections, Bolivia will demonstrate why Glencore's updated valuation of the Mine Lease continues to be flawed and inflated.

331. The FMV of the Mine Lease must be assessed as of 19 June 2012 **(Section 4.1.1)**. Claimant's valuation is premised on a negligent, imprudent and misinformed willing buyer **(Section 4.1.2)**, and relies on unreasonable assumptions which result in an inflated value **(Section 4.1.3)**. Claimant's valuation is further inflated because it considers the Old Tailings Reprocessing Project, which was not a going concern as of the valuation date (nor is it today) and is not economically viable **(Section 4.1.4)**.

4.1.1 *In Limine,* The Fair Market Value Of The Mine Lease Must Be Assessed *Ex Ante* As Of 19 June 2012

332. The Parties agree that the Colquiri Mine Lease should be valued *ex ante*,[523] but disagree on the appropriate valuation date.

333. As explained in Section 2.2.1 above, pursuant to the Treaty's, the Mine Lease should be valued as of 19 June 2020, that is, the day "*immediately before*"[524] its alleged expropriation through the 20 June 2012 Reversion Decree.[525] It is undisputed that Bolivia took control of the Mine only after the 20 June 2012 Reversion Decree and that, until that point, Claimant maintained in full all its legal rights under the Mine Lease – which Claimant exercised when it voluntarily entered into the Rosario Agreement with the *cooperativistas* on 7 June 2012. Claimant's own disclosures to the market stated that "*the Colquiri mine was nationalized on 22 June 2012*;"[526] *i.e.*, as a result of the 20 June 2012 Reversion Decree.

334. Both Claimant's original valuation date of 29 May 2012, and its newly proposed alternative 4 June 2012 date, are legally, factually and even logically unsupported, and should be disregarded by the Tribunal (See ¶¶ 87).

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522 Compass Lexecon I, Table 1; Documents produced by Claimant for Request 26, **R-455**.

523 Compass Lexecon II, ¶ 16 footnote 6; Quadrant II, ¶ 1(a).

524 Treaty, **C-1**, Article 5(1).

525 Supreme Decree No 1.264 of 20 June 2012, **C-39**.

526 Glencore Annual Report 2012, **R-257**, p. 71 (emphasis added).

4.1.2 Claimant's Experts' Updated Valuation Of The Mine Lease Remains Premised On A Negligent And Misinformed Willing Buyer

335. It is not in dispute that, under international law, the market value of an asset is assessed by reference to the concept of fair market value (the "**FMV**"). It is also not in dispute that the FMV of an asset is determined based on an objective standard, understood as the price a hypothetical reasonable, well-informed and prudent willing buyer would pay to a willing seller for the asset at a given time.[527]

336. When examining the parties' valuations, arbitral tribunals consistently consider "*the price that a willing buyer would pay to a willing seller in circumstances in which each had good information, each desired to maximize his financial gain, and neither was under duress or threat.*"[528]

337. The hypothetical willing buyers and sellers used to determine the objective fair market value of an asset are assumed to be knowledgeable and prudent. As the *Vestey Group* tribunal explained, the determination of FMV "*is primarily an economic exercise, which involves identifying the price at which the asset would change hands between a willing buyer and a willing seller in an arm's length transaction where the parties each act knowledgeably, prudently, and without coercion*."[529]

338. When valuing going concerns, tribunals will look to the investment's "*earning capacity during the remainder of its life […] for assessing its 'market value.*"[530] In other words, the

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527 Reply on Quantum, ¶¶ 51, 151, foot note 389.

528 *Siemens AG v Argentine Republic* (ICSID Case No ARB/02/8) Award of 6 February 2007, **CLA-67**, ¶ 325 (emphasis added), citing *Starrett Housing Corporation and others v Government of the Islamic Republic of Iran,* Final Award (1987-Volume 16) Iran-US Claims Tribunal Report, **CLA-11**, ¶ 277. See also, *Enron Corporation and Ponderosa Assets LP v Argentine Republic* (ICSID Case No ARB/01/3) Award of 22 May 2007, **CLA-68**, ¶ 361; *Compañía del Desarrollo de Santa Elena SA v Republic of Costa Rica* (ICSID Case No ARB/96/1) Final Award of 17 February 2000, **CLA-25**, ¶ 73 ("*there is no dispute between the parties as to the applicability of the principle of full compensation for the fair market value of the Property, i.e., what a willing buyer would pay to a willing seller*."); *Southern Pacific Properties (Middle East) Limited v Arab Republic of Egypt* (ICSID Case No ARB/84/3) Award on the Merits of 20 May 1992, **CLA-18**, ¶ 197 ("*[i]n the Tribunal's view, the purchase and sale of an asset between a willing buyer and a willing seller should, in principle, be the best indication of the value of the asset*"); *Sempra Energy International v Argentine Republic* (ICSID Case No ARB/02/16) Award of 28 September 2007, **CLA-71**, ¶ 405; *Azurix Corp v Argentine Republic* (ICSID Case No ARB/01/12) Award of 14 July 2006, **CLA-63**, ¶ 424; *CME Czech Republic BV v Czech Republic* (UNCITRAL) Final Award of 14 March 2003, **CLA-42**, ¶ 140 ("*[o]ne of the best possible indicators of an enterprise's fair market value is what an actual buyer thinks it is worth*").

529 *Vestey Group Ltd v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB/06/4, Award of 15 April 2016, **RLA-5**, ¶ 402 (emphasis added).

530 *Middle East Cement Shipping and Handling Co SA v Arab Republic of Egypt* (ICSID Case No ARB/99/6) Award of 12 April 2002, **CLA-34**, ¶ 127; G. Arangio-Ruiz, *Second Report on State Responsibility*, Yearbook of the International Law Commission, 1 (1989), **RLA-103**, ¶ 23 ("*[c]ompensation by equivalent is thus intended to substitute, for the injured State, for the property, the use, the enjoyment, the fruits and the profits of any object, material or non-material, of which the injured party was totally or partly deprived as a consequence of the internationally wrongful act*").

Tribunal should consider the revenue stream that a willing buyer would have factored in to value the Assets.[531]

339. Consistent with the above, in establishing the price a reasonable buyer would pay for an asset, the Iran-U.S. Claims Tribunal has stressed the need to ensure that all inputs in the valuation of an income–producing asset be accurate, reliable, and realistic.[532] The *Starrett Housing* award specified that the methods employed and approach to each stage of the fair market valuation should be "*logical and appropriate*," as well as based on assumptions and premises that are "*reasonable*," "*reasonably and fairly determined*," "*reliable*," and "*realistic*."[533]

340. However, Claimant's expert's valuation of the Mine Lease is premised on a negligent and misinformed willing buyer:

341. *First*, a willing buyer would estimate the Mine Lease's value on the basis of Colquiri's abundant historic performance data, as reflected in its audited financial statements and operations reports, and would have given little weight to mere hypothetical projections and plans without and independent review and economic assessment of their feasibility. Indeed, as explained by the Tribunal in *Railroad Development*:

> *The Tribunal agrees with Respondent that, **given the past performance** of [Ferrovías Guatemala], the claim of lost profits is speculative. To say the least, **it has not been proved that after eight years of operation a sharp improvement in [Ferrovías Guatemala's] performance was in the offing**, as Claimant's experts have assumed.*[534]

342. Warren Buffet, the renowned investor, explains that when considering an acquisition he completely disregards the sellers' projections and forecasts and, instead, focuses solely on its past performance:

> *I have no use whatsoever for projections or forecasts. They create an illusion of apparent precision. The more meticulous they are, the more concerned you should be. [I] never look at projections, but [I] care very much about, and look very deeply, at track records. If a company has a lousy track record but a very bright future, I will miss the opportunity.*[535]

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531 As explained below, the Old Tailings Reprocessing Project was not a going-concern as of the reversion of the Mine Lease (Section 4.1.4)

532 *Phillips Petroleum Company Iran v Islamic Republic of Iran and the National Iranian Oil Company*, Award (1989-Volume 21) Iran-US Claims Tribunal Report, **CLA-12**, ¶¶ 111-116, 154-58.

533 *Starrett Housing Corporation and others v Government of the Islamic Republic of Iran*, Final Award (1987-Volume 16) Iran-US Claims Tribunal Report, **CLA-11**, ¶¶ 278, 285, 287, 308, 311, 319, 326 and 334.

534 *Railroad Development Corporation (RDC) v. Republic of Guatemala*, ICSID Case No. ARB/07/23, Award of 29 June 2012, **RLA-211**, ¶ 269 (emphasis added).

535 Tren Griffin, Charlie Munger The Complete Investor, Columbia Business School Publishing, Columbia University Press, 2015, **R-456**, p. **2**8 (emphasis added).

343. Had a willing buyer "*looked deeply*" at Colquiri's track record as of the reversion date, it would have seen the following with respect to each of the Mine Lease's key value drivers:[536]

Category	Mineral	Colquiri's 5-year Historical Average (2007-2011)
Ore Extraction Rates	-	277,309 MTA
Concentrator Plant's Processing Rates	-	1,000 tpd
Head grades	Tin	1.25%
	Zinc	7.16%
Recovery rates	Tin	64.07%
	Zinc	69.24%
Concentrate Grades	Tin	48.15%
	Zinc	45.40%

344. However, Claimant's expert's valuation is premised on a negligent and misinformed willing buyer that would have ignored Colquiri's past performance and, instead, would have based its valuation solely on an unsupported (and unapproved) piece of paper showing a Triennial Plan. As the following table shows, Colquiri's performance under Claimant's tenure is in stark contrast with the Triennial Plan and Claimant's experts' projections[537]:

Category	Mineral	Colquiri's 5-year Historical Average (2007-2011)	Claimant's Experts' Valuation Assumptions	Difference (%)
Ore Extraction Rates	-	277,309 MTA	550,579 MTA[538]	+ 99.54%
Concentrator Plant's Processing Rates	-	1,000 tpd	Concentrator Plant: 2,000 tpd Old Tailings reprocessing Plant: 3,000 tpd	+ 400%
Head grades	Tin	1.25%	1.29%	+ 3.20%
	Zinc	7.16%	7.52%	+ 5.02%
Recovery rates	Tin	64.07%	72.00%	+ 12.34%
	Zinc	69.24%	76.00%	+ 9.76%
Concentrate Grades	Tin	48.15%	50.00%	+ 3.84%
	Zinc	45.40%	47.00%	+ 4.44%

536 Quadrant II, ¶19, Figure 4.

537 Quadrant II, ¶ 28, 42; Sinchi Wayra S.A. Monthly Report of December 2007, GB010570, **R-410**, p. 17;Sinchi Wayra S.A. Monthly Report of December 2008, GB011021, **R-411**, p. 18; Sinchi Wayra S.A. Monthly Report of December 2009, GB011646, **R-412**, p. 20; Sinchi Wayra S.A. Monthly Report of December 2010, GB012531, **R-413**, p. 20; Sinchi Wayra S.A. Monthly Report of December 2011, GB012980, **R-414**, p. 20.

538 According to the Triennial Plan, the Mine would reach a 550,579MT rate by 2014 and it would remain constant until the end of the Mine Lease.

345. Additionally, Claimant's willing buyer would assume an increase in value for head grades, recovery rate and concentrate grades (between 3.20% and 12.34% higher that Colquiri's past performance) while Colquiri's historic performance shows that such values had been constantly decreasing during Claimant's tenure. As a result, there would be no reason for a willing buyer to assume at the time of the Mine Lease's reversion, that this historic downward trend could be halted, much less converted into an upward trend.

346. By contrast, Bolivia's experts' assumptions are in line with Colquiri's historic performance as of the reversion of the Mine Lease, as the following table shows:[539]

Category	Mineral	Colquiri's 5-year Historical Average (2007-2011)	Bolivia Experts' Valuation Assumptions	Difference (%)
Ore Extraction Rates	-	277,309 MTA	307,00 MTA	+ 10.70%
Concentrator Plant's Processing Rates	-	1,000 tpd	1,000 tpd	=
Head grades	Tin	1.25%	1.17%	- 6.4%
	Zinc	7.16%	6.70%	- 6.42%
Recovery rates	Tin	64.07%	65.54%	+ 2.29%
	Zinc	69.24%	69.61%	+ 0.53%
Concentrate Grades	Tin	48.15%	49.00%	+ 1.77%
	Zinc	45.40%	45.00%	- 0.88%

347. Additionally, Colquiri's *ex post* performance is in line with Bolivia's experts' valuation assumptions and in sharp contrast with Claimant's experts' assumptions (Section 4.1.3).

348. *Second*, in its Answer Memorial, Bolivia explained that had a willing buyer reviewed the Triennial Plan, it would have realized that (i) the Plan had not been approved, (ii) as any plan, it was mainly aspirational and it had not yet began being implemented as of the reversion date, (iii) it includes no supporting economic, social or environmental analysis, (iv) it assumes exponential growth as a result of negligible investments, (v) Claimant prepared other more conservative production plans (*e.g.*, the March 2012 Investment Plan) after the Triennial Plan, and (iv) the Triennial Plan makes no reference to the Old Tailings Project.[540]

539 Quadrant II, ¶ 28, 42.

540 Statement of Defence, ¶ 639.

349. Claimant's Reply either does not respond to Bolivia's demonstration or includes meritless responses. Additionally, disclosure has vindicated Bolivia's case. In response to Bolivia's request No. 4[541], Claimant was incapable of finding any evidence of: (i) the Triennial Plan's alleged approval; (ii) the Triennial Plan's alleged implementation; or (iii) that the Triennial Plan had been subject to economic, social or environmental analyses.

350. *Third*, and as a result of the above, had a willing buyer reviewed the Triennial Plan, it would have contrasted it with Colquiri's past performance and concluded that its assumptions and projections are unreasonable. A willing buyer would have noted that the Triennial Plan unreasonably assumes *inter alia* that:

- Resources would be "magically" delineated and reserves would "magically" replenish with negligible investments in exploration;[542]

- Production levels at the Concentrator Plant would double in only three years, setting a new a maximum of 2,000 tpd. Additionally, such levels would remain stable throughout the entire life of the Mine (which is implausible) and ignores the problems and limitations that mine operations face (equipment malfunction, lack of equipment, labour strikes, conflicts with *cooperativistas*, etc.), which lead to unstable production;[543]

- Grades and metallurgical recoveries would remain constant from 2014 until 2030, which is inconsistent with Colquiri's 2007-2011 data, as explained below (Section 4.1.3.4), is

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541 Procedural Order No. 9, Annex 2, Request No. 4 ("*The Documents and Communications prepared and/or reviewed by Colquiri and/or Sinchi Wayra and/or the Glencore Group that refer to the approval and/or budgeting for and/or implementation of the Triennial Plan, including but not limited to: a. minutes of director meetings; b. minutes of budget committee meetings; c. reports and/or assessments of the Triennial Plan's economic viability; d. budgets, AFEs and investment authorizations for the budgeting for and/or implementation of the Triennial Plan; any accrued expenses arising out of the implementation of the Triennial Plan booked as OPEX and/or CAPEX; and f. social and/or environmental studies required for and/or related to the Triennial Plan's implementation […]*").

542 SRK I, ¶ 46.

543 Colquiri first quarter analysis, **C-326**, p. 16 ("*Menor tratamiento por las siguietnes causas: […]* ***En marzo se tuvieron 6 paradas en el proceso por sabotajes del personal en la operación***") (emphasis added); Sinchi Wayra S.A. Monthly Report of August 2011, GB012767, **R-457**, p. 2 ("***Mine ore production was below the plan*** *due to […] the repair of the engine of the San José shaft and some problems with the mining equipment*") (added emphasis); Sinchi Wayra S.A. Management Report of January 2006, GB007059, **R-443**, p. 2 ("***Mine ore production and ore treatment were below than plan*** *due to lower availability of some mining equipment*") (emphasis added); Sinchi Wayra S.A. Monthly Report of June 2009, GB011311, **R-458**, p. 2 ("***Mine ore production was below budget*** *due to the loss of three days of production* ***because of social conflicts****. Also, we had mechanical problems with drilling and extraction equipment due to* ***delay in supply of spares***") (emphasis added); Sinchi Wayra S.A. Monthly Report of August 2009, GB011410, **R-459**, p. 2; Sinchi Wayra S.A. Monthly Report of October 2009, GB011544, **R-460**, p. 2; Sinchi Wayra S.A. Monthly Report of March 2010, GB011796, **R-461**, p. 2; Sinchi Wayra S.A. Monthly Report of May 2010, GB011896, **R-462**, p. 2; Sinchi Wayra S.A. Monthly Report of July 2011, GB012717, **R-463**, p. 2; Sinchi Wayra S.A. Monthly Report of October 2011, GB012867, **R-464**, p. 2.

denied by the Mine's *ex post* data[544] as well as by the grade of concentrates processed by Vinto (a substantial part of which is purchased from Colquiri)[545]; and

- The Mine's costs would decrease in time due to alleged economies of scale [redacted] [546] and that, historically, the Mine has never attained economies of scale[547]).

351. Thus, a willing buyer would have assumed a purchase price for Colquiri mostly based on its past performance. Given that Colquiri' past performance is in stark contrast with the Triennial Plan, had a willing buyer reviewed the Triennial Plan it would not have taken it at face value and, instead, would have entirely dismissed it or substantially adjusted its assumptions.

352. *Fourth*, a willing buyer would have also noticed the history of social conflicts with the *cooperativistas* and factored the related risk in its valuation (*i.e.* that the *cooperativistas* could temporarily or permanently interrupt the Mine's operations), [redacted]

[redacted] [548]

353. As explained above in Section 3.2, the conflicts with *cooperativistas* that Claimant noted in its due diligence memorandum only worsened during Claimant's tenure at the Mine. This is reflected in many of Claimant's monthly reports that a willing buyer would have access to, and carefully review, during any due diligence process of the Mine Lease:

> January 2006: *Rumours of conflicts between cooperative miners in SW's active mining operations continued during January with peaks after the President took*

544 Villavicencio I, ¶¶ 68-69.

545 Villavicencio III, ¶ 65.

546 [redacted]

547 Quadrant II, ¶ 69 ("*RPA and Compass Lexecon continue to assume that Colquiri would benefit from economies of scale as it ramped-up production in the mine, despite the evidence that* ***Colquiri failed to achieve economies of scale in the past. Colquiri experienced rising operating expenses on a US$ per MT basis for every year of operation*** *from 2006 through 2011. Never during this time did Colquiri show that it could increase production and decrease its operating expense per MT*") (emphasis added).

548 [redacted]

> *office.* ***Threats from local Cooperatives to invade Colquiri persisted*** *and announcements to nationalize Vinto continued.*[549]
>
> June 2006: *In parallel to salary negotiations an important negotiation was conducted with the Mining Cooperative 26 of February from Colquiri.* ***This cooperative has maintained the threat to take over the mine in Colquiri for the last 18 months*** *until the agreement was signed.*[550]
>
> December 2008: *Vacations were taken in two groups* ***in order to protect the mine from a possible "cooperativistas" invasion*** *from the superior levels.*[551]
>
> May 2010: *Mine production and ore treatment were below the plan due to a day lost because of the lack of compressed air due to the break of the main pipe.* ***This pipe was affected [by] the blasting works carried out by the "cooperativistas" in the main raise***.[552]
>
> January 2011: ***There is a lot of social pressure, including work space invasion and stealing of mineral from the cooperatives people due to high tin prices***.[553]
>
> March 2012: *In Colquiri* ***there was a minor environmental incident. It was caused by people from the cooperatives*** *that closed down a tails pipeline valve. Therefore the tails overflow from the concentrator plant. […]* ***We also experienced aggressive intrusion of people from cooperatives who damaged our facilities***. *We have reinforced the surveillance in the entrance.*[554]

354. In the unlikely event that the Tribunal were to conclude that Bolivia breached its obligations under the Treaty and that Claimant is entitled to compensation (*quod non*), the Tribunal would have to factor the business risk created by the *cooperativistas* in any compensation. As Prof Marboe explains:

> *It is, according to this view, necessary to distinguish the negative consequences on the value which were caused by the actions of the State from those negative consequences on the value caused by changes of the general political, social, and economic conditions. The former must be excluded from the valuation because otherwise the State would benefit from its own acts. The latter, however, fall under the business risk.*[555]

355. If the Tribunal were to ignore the business risk created by the *cooperativistas* in an award of compensation, Claimant would be overcompensated, [redacted]

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549 Sinchi Wayra S.A. Management Report of January 2006, GB007059, **R-443**, p. 3.

550 Sinchi Wayra S.A. Management Report of June 2006, GB007952, **R-445**, p. 5 (emphasis added)

551 Sinchi Wayra S.A. Monthly Report of December 2008, GB011021, **R-411** p. 2 (emphasis added).

552 Sinchi Wayra S.A. Monthly Report of May 2010, GB011896, **R-462**, p. 2 (emphasis added).

553 Sinchi Wayra S.A. Monthly Report of January 2011, GB012381, **R-465**, p. 2 (emphasis added).

554 Sinchi Wayra S.A. Monthly Report of March 2012, GB013130, **R-466**, p. 1 (emphasis added).

555 Irmgard Marboe, Calculation of Compensation and Damages in International Investment Law (Oxford University Press, 2009) (extract), **RLA-212**, ¶ 3.258.

356. *Fifth*, when assessing the Mine Lease's value, a willing buyer would have also considered the impact of the Rosario Agreement and the shared-risk agreement (that Claimant was negotiating with the State pursuant to the requirements of the 2009 Constitution (the "**Shared Risk Agreement**") when the Mine Lease was reverted) on the Mine Lease's value.

357. In its Reply on quantum, Claimant conveniently argues that the Rosario Agreement and the Shared-Risk Agreement should be ignored in the valuation of the Mine Lease. This is wrong.

358. One, it is not in dispute that, pursuant to the Rosario Agreement, on 7 June 2012 Claimant willingly assigned the *cooperativistas* the right to mine the Rosario vein (Colquiri's richest vein).[556] As explained in Section 2.2.1 above, the fact that Claimant was able to assign such rights on 7 June 2012 confirms that at the time it was still in control of, and held legal rights over, the Mine Lease. Therefore, pursuant to the Treaty, a willing buyer would have considered the Rosario Agreement and, as a result, excluded the value of the Rosario vein from the Mine Lease's FMV.

359. Claimant concedes that if the valuation date proposed by Bolivia were correct, the impact of the Rosario Agreement would have to be accounted for in the FMV of Colquiri.[557] However, Claimant argues that its experts demonstrated that "*the Agreement would have reduced the FMV of Colquiri by less than 1%, because the Agreement obligated the cooperativistas to sell the ore they extracted from the Rosario vein to Glencore Bermuda*."[558] This is incorrect.

360. As Quadrant explains, Claimant's experts' analysis "*has a fundamental flaw in that it [mistakenly] assumes that the cooperatives are price-takers with no bargaining power over the mine operator*."[559] The fact that Claimant willingly assigned the *cooperativistas* the right to mine the Rosario vein (along with the many incidents that the *cooperativistas* caused to Claimant's operations) clearly shows that the *cooperativistas* had a strong bargaining power. For that reason, Quadrant concludes that any realistic compensation scheme would have to provide adequate compensation to the *cooperativistas* recognizing their bargaining power and maintains its original 14.8% downward adjustment to the Mine Lease's value.[560]

361. Two, a willing buyer would also have factored in the negative impact that the Shared-Risk Agreement would have on the Mine Lease as, per Claimants own words, it "*would have*

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556 Reply on Quantum, ¶ 58.

557 Reply on Quantum, ¶ 58 ("*Bolivia is wrong about the valuation date and, even if it were correct (it is not), it inflates the impact of the Rosario Agreement*.").

558 Reply on Quantum, footnote 103.

559 Quadrant II, ¶ 82.

560 Quadrant II, ¶ 87.

provided for a State participation of up to 55% of the profits (increasing the total Government take to 77-79%)."[561]

362. Claimant argues that the Tribunal should exclude the Shared-Risk Agreement from the valuation of the Mine Lease (and, as a result, the potential transfer of 55% of Glencore's participation in the Colquiri Mine Lease) because (i) such transfer would have breached the Treaty (as it was allegedly forced), and (ii) a willing buyer would assume that the State would have compensated the investor for any Treaty breach.[562] Claimant's argument is flawed in several respects:

363. One, Claimant has never argued in this arbitration that the negotiation of the Shared-Risk Agreement constitutes a Treaty breach. This shows that Claimant's forced negotiations allegations carry no weight.

364. Two, it is not in dispute that each Party bears the burden of proving the facts on which it relies.[563] Claimant has not submitted any evidence (other than Mr Lazcano's baseless allegations) that the negotiation of the Shared-Risk Agreement would have been forced. On the contrary, contemporaneous documents disprove Claimant's allegations.

365. Three, in addition to the Shared-Risk Agreement, Claimant has negotiated and executed similar shared-risk agreements with the State for the Porco and Bolivar mines in August 2012.[564] Had this negotiations been forced, as Claimant suggests, it would have submitted claims, like the present, against Bolivia or it would have alerted its shareholders in compliance with its disclosure obligations. It did not.

366. Mr Eskdale alleges that Claimant has not submitted claims for the Porco and Bolivar mines to avoid retaliation from the State (who, according to Mr Eskdale, could have taken 100% of the mines).[565] This is absurd.

367. If Claimant had feared retaliation from Bolivia, it would have not filed for the present arbitration. Additionally, Claimant's bad faith allegations that Bolivia would have expropriated the Porco and Bolivia mines, had Claimant refused to enter into the referred

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561 Glencore International's response to the nationalization of the Colquiri mine in Bolivia, press release of 22 June 2012, **R-258**.

562 Reply on Quantum, footnote 175; Compass Lexecon II, ¶ 22.

563 Reply on Quantum, ¶ 24.

564 March 2012 Investment Plan, April 4, 2012, **EO-07**; Eskdale III, ¶ 53.

565 Third witness statement of Mr Eskdale, ¶ 53. Eskdale does not submit any letters, internal memos, etc. showing that Glencore assessed the pros and cons and finally decided to sign the share-risk contracts for the Porco and Bolivar mines (such discussions should have taken place in light of the importance of the decision).

shared-risk agreements, is unsupported by fact, as recent events show. Claimant has been engaged in this arbitration since 2016 and continues, to date, to operate Porco and Bolivar mines without any interference from the State. This confirms that Claimant's accusation does not hold water.

368. The negotiations of the shared-risk agreements commenced more than 5 years before Mine Lease's reversion to the State. A letter sent from Sinchi Wayra to Comibol dated May 2007 states that "*Sinchi Wayra tiene toda la voluntad y predisposición de continuar las negociaciones con COMIBOL para la migración de los contratos de arrendamiento a riesgo compartido para las operaciones de Colquiri y Porco*."[566]

369. Similarly, a 2007 letter from Sinchi Wayra to Comibol, confirms that Claimant entered voluntarily into the shared-risk agreement negotiations:

> *Deseamos reiterar nuestra mejor disposición y buena fe para llevar a cabo las negociaciones de todos los contratos suscritos con Uds. cuyos resultados sean de beneficio para ambas partes y del país. También reiterar que se trata de una renegociación de contratos a la cual hemos accedido en forma voluntaria, con[s]cientes del propósito de lograr mejoras a favor de COMIBOL, aun cuando los contratos de arrendamiento se encuentran en plena vigencia y sobre los cuales nos reservamos todos nuestros derechos bajo los acuerdos existentes.*[567]

370. In conclusion, the Parties agree that the FMV of an asset is determined based on the price a hypothetical reasonable, well-informed and prudent buyer would pay to a willing seller for the asset at a given time. Claimant's experts' valuation of the Mine Lease is premised on a negligent and misinformed willing buyer that would have: (i) completely disregarded Colquiri's historic performance and, instead, would have based its valuation entirely on the unapproved and unrealistic Triennial Plan (which projected an unprecedented exponential growth in the Colquiri's production, after negligible investments); and (ii) ignored the conflicts with the *cooperativistas*, the Rosario Agreement and the Shared-Risk Agreement. Therefore, Claimant's experts' valuation of the Mine Lease is speculative (at best) and should be rejected by the Tribunal.

4.1.3 Claimant's Updated Valuation Of The Mine Lease Is Grossly Inflated

371. *In limine*, the Parties agree on the following points with respect to the valuation of the Mine Lease:

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566 Exhibit **C-75** (emphasis added).

567 Letter from Sinchi Wayra (Mr Capriles) to Comibol (Mr Vargas) of 11 October 2007, **C-89**, p. 3.

- The Mine Lease shall be valued using the DCF method, *i.e.*, projecting future cash flows until the end of the Mine Lease and discounting them back to the valuation date.[568] The Parties, however, do not agree on the application of the DCF method to value the Old Tailings Project (as Bolivia demonstrates in Section 4.1.4 below, this Project was not a going concern and, if anything, reality has confirmed that it is not economically viable);

- The Mine Lease shall be valued following the *principle of reasonableness*, which, according to CIMVal Standards, is one of the "*basic tenets […] [that] must be followed in the Valuation process […]*" of a mine asset;[569] and

- The relevant variables to value the Mine Lease include mineral resources and reserves, production forecasts, grade or mineral concentration, metallurgical recovery rates, concentrates prices, OPEX and CAPEX.[570] The Parties disagree, however, on how to model most of these variables.

372. In its Statement of Defence, Bolivia explained that "*[a] model is only as good as the assumptions it uses. Faulty assumptions or bad data result in faulty output*" (garbage in, garbage out).[571]

373. In its Reply, Glencore and its experts attempt to respond to Bolivia's criticisms, to no avail. Below we address RPA's and Compass Lexecon's responses, and demonstrate why they are meritless. Claimant's valuation of the Mine Lease continues to adopt unreasonable, unsupported and self-serving assumptions for all key value drivers, and should thus be rejected. Contrary to industry standards, Claimant's valuation continues to include hypothetical mineral resources and reserves, and attributes full value to inferred mineral resources that lack any geological and economic certainty (**4.1.3.1**). Claimant's valuation further forecasts unduly high production levels (**4.1.3.2**), head grades (**4.1.3.3**) and metallurgical recoveries (**4.1.3.4**), relies on non-verified concentrate prices (**4.1.3.5**) and underestimates CAPEX and OPEX (**4.1.3.6**).

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568 Statement of Defence, ¶ 730; Reply on Quantum, ¶ 50.

569 CIMVal Standards and Guidelines for Valuation of Mineral Properties, February 2003, **RPA-73**, S4.1. See also The CIMVAL Code for the Valuation of Mineral Properties 2019, **R-435**, Section 2.1.3. Both SRK and RPA refer to the CIMVal Standards in support of their analyses (see, e.g., RPA II, ¶ 50; SRK II, ¶ 36).

570 RPA II, ¶ 20 b); SRK I, Section 7.3.

571 Statement of Defence, ¶ 789.

4.1.3.1 Contrary to industry standards, Claimant's valuation continues to include hypothetical mineral resources and reserves, and attributes full value to inferred mineral resources which lack geological and economic certainty

374. In its first report, SRK demonstrated that RPA had inflated the Mine's resource and reserve base (and, therefore, the LOM) (i) by arbitrarily assuming that "*10.7 Mt of Mineable Material would be available to be mined*"[572] (despite the fact that, as of December 2011, Colquiri resources and reserves totalled 4.2 Mt), and (ii) by not applying any discount to these resources and reserves (therefore assuming that 100% of them would be mined).[573]

375. In its second report, RPA insists on these arbitrary assumptions and attempts to respond to SRK's criticisms, to no avail.

376. *First*, according to RPA, assuming that new resources will be automatically delineated and reserves automatically replenished would be reasonable because the Mine has a large mineral deposit "*and a high degree of success in discovering new Mineral Resources, and in converting Mineral Resources to Ore Reserves*. *[…] Over the fourteen year period from 2005 to 2018, Ore Reserves were replaced annually and it is reasonable to assume that the system of "mine and replenish" would continue*."[574] RPA's arguments miss the point and are, in any event, wrong.

377. <u>One</u>, RPA's assumption is contrary to common sense. By stating that "*it is reasonable to assume that the system of 'mine and replenish' would continue*,"[575] RPA wants this Tribunal to believe that the Colquiri Mine would be indefinite as it would continue to maintain the same reserves and resources forever. This simply does not make sense.

378. <u>Two</u>, it is not in dispute that the Mine has many more mineral resources than reserves. Table 1 of RPA's Second Report shows that, as of 2012, the Mine had 2.7 million MT of resources and 1.5 million MT of reserves.[576] By definition, mineral resources have no demonstrated economic viability. As stated in the CIM Definitions Standards:

> *[t]he term <u>Mineral Resource</u> covers mineralization and natural material <u>of intrinsic economic interest</u> which has been identified and estimated through exploration and sampling and <u>within which Mineral Reserves **may subsequently be defined** by the</u>*

572 SRK I, ¶ 55.

573 SRK I, ¶¶ 52-53.

574 RPA II, ¶¶ 32-34.

575 RPA II, ¶¶ 32-34.

576 RPA II, Table 1.

> *consideration and application of technical, **economic**, legal, environmental, socio-economic and governmental factors*.[577]

379. It is only after the application of these "*technical, **economic**, legal, environmental, socio-economic and governmental factors*" that mineral reserves – which do have economic viability – may be identified. The CIM Definition Standards define mineral reserves as:

> *[…] those parts of Mineral Resources which, after the application of all mining factors, result in an estimated tonnage and grade which, in the opinion of the Qualified Person(s) making the estimates, **is the basis of an economically viable project** after taking account of all relevant processing, metallurgical, economic, marketing, legal, environment, socio-economic and government factors*.[578]

380. Furthermore, and for obvious reasons, it is contrary to industry standards (which Glencore and its experts acknowledge are applicable in this case[579]) to include potential or hypothetical resources or reserves (i.e., quantities of ore that have not even been included in the resources and reserves estimate) in a DCF valuation of a mining asset. The 2003 CIMVal standards explicitly state that:

> ***[i]t is not acceptable to use**, in the Income Approach [i.e., a DCF valuation], 'potential resources', 'hypothetical resources' and other such categories that do **not conform to the definitions of Mineral Reserves and Mineral Resources***.[580]

381. According to the JORC Code (relevant to this dispute because, as RPA acknowledges, mineral resources and reserves at Colquiri are "*estimated using the Joint Ore Reserves Committee (JORC) Code*"[581]):

> *[g]eological evidence and knowledge required **for the estimation of Mineral Resources** must include sampling data of a type, and at spacings, appropriate to the geological, chemical, physical, and mineralogical complexity of the mineral occurrence, for all classifications of Inferred, Indicated and Measured Mineral Resources. **A Mineral Resource cannot be estimated in the absence of sampling information***.[582]

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577 CIM Definition Standards For Mineral Resources and Mineral Reserves of 27 November 2010, **R-264**, page 4 (emphasis added).

578 CIM Definition Standards For Mineral Resources and Mineral Reserves of 27 November 2010, **R-264**, page 6 (emphasis added).

579 RPA II, ¶ 50.

580 CIMVal Standards and Guidelines for Valuation of Mineral Properties, February 2003, **RPA-73**, section G4.9 (emphasis added). The 2019 CIMVal standards preserve this important rule. See The CIMVAL Code for the Valuation of Mineral Properties 2019, **R-435**, Section 3.4.3 ("*In the Income Approach, it is generally not acceptable to use in a Valuation any mineralization categories (such as potential quantity and grade, potential resource, exploration potential, exploration target, potential deposit, or target for further exploration) that do not conform to the definitions of Mineral Reserves and Mineral Resources*.").

581 RPA II, ¶ 20.b.i.

582 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code) 2012 Edition, **R-255**, p. 11 (emphasis added).

382. As indicated above, as of the valuation date, the Mine had 2.7 million resources and 1.5 million reserves, which gives a total of 4.2 million.[583] The 6.5 million that RPA "magically" adds in its valuation (to reach its 10.7 million estimate) are not the result of exploration and sampling, but simply assumed by RPA based on "experience" ("*we fully expect that the history of replacement will continue […]. Based on this, we have assumed a minimum 20-year mine life (i.e., 2012 to 2031) for the purposes of our review*"[584]). But it is contrary to industry standards to include hypothetical mineable material in a DCF valuation.

383. Glencore's own actions confirm the foregoing. Indeed, at the time it purchased the Assets back in 2005, Glencore stated that there was potential to extend the mine life "*should new reserves continue to be identified*," yet in its DCF valuation it did not "*place any value on this [potential or hypothetical reserves]*."[585] Just as Glencore did, a willing buyer would not place any value on the Mine's hypothetical resources or reserves.

384. Three, there is no basis for RPA to assume that historical reserve replenishment will continue over time, much less that it would be sufficient to sustain the massive increase in annual production levels assumed by Claimant's valuation (according to which, the historical production average would have doubled from 278,118 tpy to 550,579 tpy by 2014).[586] As explained by SRK:

> *[…] historically the production rate [at Colquiri] was low, <1000 tpd and hence to replace depleted reserves at such a rate in the generally shallower area of the mine would not have been particularly onerous. The key issue here is that this historical replenishment cannot be guaranteed into the future as the mine deepens and mineralization becomes more remote from mine infrastructure, let alone that resources and reserves would be replenished at such a rate to support a doubling of the production rate for an artificially extended LoM of 20 years*.[587]

385. *Second*, RPA's reliance on *ex post* data and, specifically, on the fact that new resources and reserves have been found by the State at Colquiri post-reversion is misplaced.

386. One, the Parties agree that the valuation of the Mine Lease must be performed *ex ante*.[588] As of the reversion date, as a result of Glencore's consistent underinvestment in exploration, exploration data was scarce; thus, a willing buyer would have had no basis to conclude that

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583 RPA II, ¶ 30 and Table 1.

584 RPA II, ¶ 31.

585 Glencore inter office correspondence from Mr Eskdale to Mr Strothotte and Mr Glasenberg of 20 October 2004, **C-196**, p. 3.

586 Average for the period 2006 – 2011. DCF and Calculations (Colquiri), **EO-02**, Table 3, Colquiri – Historical Production. See also RPA II, ¶ 52.

587 SRK II, ¶ 29 (emphasis added).

588 See Section 2.2.1 above.

new resources and reserves would be found in the future, much less the additional 6.5 MT assumed by RPA.[589] As explained by SRK, as of the reversion date, "*[…] there ha[d] been little to no exploration work backing up RPA's bold assumption [that resources and reserves will be found to support a 20-year LOM]*."[590] A willing buyer would have analysed Colquiri's historical data, which shows a constant decrease in the Mine's total resources and reserves during the 5 years preceding the Mine Lease's reversion. As Quadrant explains, this is also apparent in RPA's second report:

> *[t]he Second RPA Report shows that the total resources and reserves at the Colquiri Mine were steadily decreasing, from a high of 6,256,000 MT in 2007 to 4,181,000 MT in 2011*.[591]

		Glencore Control						
Category		**2005**[109]	**2006**[110]	**2007**[111]	**2008**[112]	**2009**[113]	**2010**[114]	**2011**[115]
Measured	kt	532	479	528	460	482	768	1,511
Indicated	kt	2,094	2,293	2,513	2,462	2,299	1,682	727
Inferred	kt	866	1,173	1,171	1,133	1,095	1,462	1,943
Total Resources	**kt**	**3,492**	**3,945**	**4,212**	**4,055**	**3,876**	**3,912**	**4,181**
Proved	kt	1,095	1,097	1,061	1,030	1,066	859	753
Probable	kt	848	936	983	794	667	714	802
Total Reserves	**kt**	**1,943**	**2,033**	**2,044**	**1,824**	**1,733**	**1,573**	**1,555**
Total Resource + Reserves	**kt**	**5,435**	**5,978**	**6,256**	**5,879**	**5,609**	**5,485**	**4,181**

387. Thus, there is no such thing as RPA's claimed "*history of replacement*."

388. Two, as explained above, Colquiri's *ex post* operations (under the State's control) have been substantially different from, and not comparable to, Colquiri's operations under Glencore's control. Post-reversion, Colquiri almost tripled its number of employees (from 458 employees in 2011 to 1,249 employees by 2014[592]) and, only between 2013 and 2017, it invested US $ 3.4 M to carry out an ambitious exploration program which made it possible to delineate new resources and reserves[593]. Therefore, Claimant cannot seriously rely on *ex post* data to support its case.

389. *Third*, while RPA accepts that a discount must be applied to mineral resources ("*there would be some reduction*"),[594] it argues that such discount should not be 40%, as proposed by SRK. RPA is, again, wrong.

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589 RPA II, ¶ 41 (10.7 MT – 4.2 MT = 6.5 MT).

590 SRK I, ¶ 43 (emphasis added).

591 Quadrant II, ¶ 37 (emphasis added); RPA II, Table 1.

592 Quadrant II, footnote 51.

593 Compañía Minera Colquiri Summary of Investment Projects 2013- Nov 2017, **R-38**.

594 RPA II, ¶ 48 ("*Second, for Mineral Resources, while there would be some reduction, there is no support for 40% in operations or mining practices*").

390. One, despite accepting the need for a discount, RPA refuses to say what it should be (even though RPA has access to the Mine's historical resource data and to *ex post* data up to, at least, 2018).[595] This tactical behavior is improper (especially from an expert deemed to be an assistant of the Tribunal) and should lead the Tribunal to dismiss RPA's criticism of SRK's 40% discount.

391. [redacted][596]

392. Three, it is not in dispute that almost 70% of the mineral resources at Colquiri are *inferred* resources,[597] which RPA acknowledges have the "*lowest confidence*" (*i.e.*, the highest uncertainty) among mineral resources.[598]

393. The JORC Code – in which RPA relies for its analysis[599] – defines inferred resources as "*that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity*."[600] Due to their uncertainty, all five mining codes, that is, the US, Canadian, South African, Australian and European codes require the exclusion of *inferred* resources from feasibility studies (i.e., studies for mineral projects that include "*detailed assessments of realistically assumed mining, processing, metallurgical […] considerations […]*").[601] This is because "*confidence in the estimate is*

595 RPA II, Table 1 – Comparison of Ore Reserves and Mineral Resources, 2005 – 2018, Glencore – Colquiri Mine. *See* Sinchi Wayra S.A. 2012 Budget, GB014019, **R-431**, See "Reserves" tab; Sinchi Wayra S.A. 2011 Budget, GB014001, **R-467**, See "Reserves" tab; Sinchi Wayra S.A. 2011 Budget, GB013998, **R-468**, See "Reserves" tab.

596 [redacted]

597 See RPA II, Table 1, column 2012 (measures resources are 108, indicated resources 716 and inferred resources 1,908, which gives a total of 2,732).

598 RPA II, ¶ 49.

599 RPA II, ¶ 44; 46.

600 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code) 2012 Edition, **R-255**, p. 21.

601 CIM Definition Standards For Mineral Resources and Mineral Reserves of 27 November 2010, **R-264**, page 3 (emphasis added).

insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure."[602]

394. The 2003 CIMVal standards provide that:

> *[i]nferred Mineral Resources should be used in the Income Approach with great care, and* ***should not be used if the Inferred Mineral Resources account for all or are a dominant part of total Mineral Resources****. Any use of Inferred Mineral Resources in the Income Approach must be justified in the Valuation Report and treated appropriately for the substantially higher risk or uncertainty of Inferred Mineral Resources compared to Measured and Indicated Mineral Resources*.[603]

395. Relying on the 2003 CIMVal standard quoted above, SRK could have excluded all *inferred* mineral resources from its valuation (i.e., 1'908,000 MT out of the 2'732,000 MT that Colquiri had as of 2012), thus leaving the resource base with only 824,000 MT resources.[604] However, SRK did not do so. Instead, SRK applied a 40% discount to all mineral resources based on Colquiri's operating history and geological uncertainty, which left the resource base with 1'640,000 MT resources[605] (i.e., almost double the 824,000 MT resources mentioned above). If anything, SRK's analysis is conservative.

396. *Fourth*, RPA challenges the 10% discount applied by SRK to mineral reserves arguing that, "*per the JORC Code, Ore Reserves have already been modified by dilution and mining losses, so a further reduction (proposed by SRK) would be a double reduction and inappropriate under the code*."[606] RPA is wrong. RPA ignores the explanation given by SRK about this issue in its first report, restated in its second report:

> *[o]n this very issue, I also stated in my first report that the 10% discount to the reserves should have already been included in the modifying factors as per the JORC Code* [redacted]

602 CIM Definition Standards For Mineral Resources and Mineral Reserves of 27 November 2010, **R-264**, page 4 (emphasis added).

603 CIMVal Standards and Guidelines for Valuation of Mineral Properties, February 2003, **RPA-73**, ¶ G4.8 (emphasis added).

604 RPA II, Table 1, shows that Colquiri had 2,732 MT resources as of 2012, out of which 108,000 were measured, 716,000 were indicated and 1'908,000 were inferred. 2'732,000 MT resources – 1'908,000 MT resources = 824,000 MT resources.

605 2'732,000 MT resources – 1'092,000 MT resources = 1'640,000 MT resources.

606 RPA II, ¶ 48.

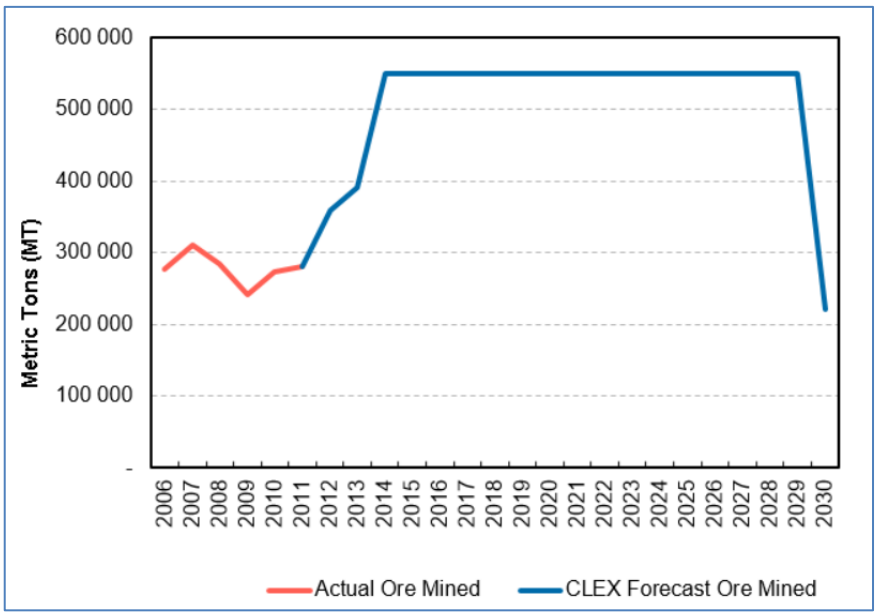
[redacted].[607]

397. For the foregoing reasons, the Tribunal should dismiss Claimant's estimate of mineral reserves and resources, and should rely on the 3.78 MT of mineable material estimated by SRK.

4.1.3.2 Claimant's updated valuation continues to assume production levels that are unduly high and disconnected from the reality of the Mine

398. Relying on the Triennial Plan, Claimant's valuation assumes that, but for the reversion, the Mine's extraction levels and the Plant's processing levels would have experienced massive increases in just a 3-year period, reaching historical maximums with negligible investments. According to Claimant:

- the Mine's annual extraction rate (which averaged 278,119 MT as of 2011)[608] would have increased to 360,000 MT by 2012, to 390,000 MT by 2013 and doubled by 2014 at 550,579 MT, as shown below:[609]



- the Mine's 2014 extraction levels would have remained stable at a staggering 550,579 MT for the next 17 years, until the end of the Mine Lease; and

607 SRK II, ¶ 32 (emphasis added).

608 2006-2011 average. See Compass Lexecon I, ¶ 25.

609 Graph prepared by Counsel with data from 2020 RPA Model, January, 2020, **RPA-55 Bis**, tab "Colquiri mine", row 22; DCF and Calculations (Colquiri), **EO-02**, Table 3, Colquiri – Historical Production.

- the Plant's processing capacity would have increased in parallel to the Mine's extraction levels, from 289,888 MT in 2011[610] to an annual processing rate of 550,579 MT by 2014.

399. Together with these massive increases in extraction and processing levels, Claimant's valuation also assumes that head grades, recovery rates and concentrates grades would all have also reached historical maximums but for the reversion (and remained constant for the next 17 years, until the end of the Mine Lease), as shown in the following table:[611]

Figure 4
Production Metrics: Historical vs Flores vs Compass Lexecon[73]

	Head Grades		Recovery Rates		Concentrate	
	Tin	Zinc	Tin	Zinc	Tin	Zinc
	(Percent)					
	(1)	(2)	(3)	(4)	(5)	(6)
1. 5-Year Historical Average (2007-2011)	1.25%	7.16%	64.07%	69.24%	48.15%	45.40%
2. Quadrant Economics	1.17%	6.70%	65.54%	69.61%	49.00%	45.00%
3. Compass Lexecon	1.29%	7.52%	72.00%	76.00%	50.00%	47.00%

400. Increasing the Mine's production is dependent on, at least, 4 key factors: (i) finding additional mineralized material which treatment is economically viable, (ii) having sufficient employees and equipment to mine this additional material, (iii) having the means and capacity to transport this additional material to the surface and (iv) having sufficient capacity at the Plant to process this additional material. [redacted] underground mineralization that cannot be transported to the surface for processing, be it because of lack of equipment, insufficient human resources or other reasons, has no economic value (just as material that can be taken to the surface but cannot be processed thereafter).[612]

401. Claimant's production forecast (based solely on the Triennial Plan) ignores these 4 key factors.

402. *First*, as explained in the previous sub-section, RPA adds 6.5 million MT to its resource and reserve base not as a result of exploration and sampling but simply based on 'experience'. Including hypothetical resources in a DCF valuation is contrary to industry standards.

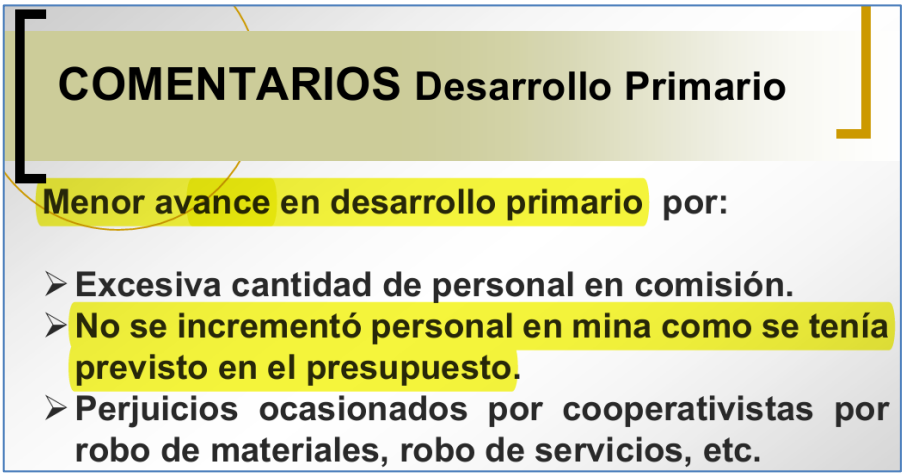
403. *Second*, mining the additional mineralized material assumed by Claimant's production forecast (550,579 tpy) would require a large number of employees. In 2011, Colquiri (under

610 DCF and Calculations (Colquiri), **EO-02**, Table 3, Colquiri – Historical Production.

611 Quadrant II, ¶ Figure 4.

612 [redacted]Once up in the surface, this additional production will have no value unless it can be processed at the Concentrator Plant. This is discussed in paragraph b) below.

Glencore's control) only had 458 employees, which almost tripled post-reversion (by 2014, State-owned Colquiri had 1,249 employees[613] to extract 348,352 tpy).[614] However, Claimant's valuation assumes that, by 2014, Colquiri would have only needed 570 employees to extract 550,579 tpy.[615] This is clearly insufficient, and Glencore's own documents confirm that an insufficient number of employees limits extraction levels:[616]



404. In Claimant's *magical* Mine, in addition to resources and reserves delineating *magically*, mineralized material is also *magically* mined.

405. *Third*, Claimant's valuation also ignores the Mine's bottlenecks, which limit the amount of mineralized material that – once mined – can be extracted for processing **(Section a)**.

406. *Finally*, Claimant's valuation also ignores the Plant's limited processing capacity **(Section b)**, as well as the energy and water limitations in the Colquiri area that make it impossible to sustain the massive extraction and processing levels assumed by Claimant **(Section c)**.

a) Claimant's projected extraction levels are impossible to achieve given the Mine's bottlenecks

407. Bolivia addressed the Mine's bottlenecks in its Statement of Defence,[617] [redacted][618]

613 Quadrant II, footnote 51.

614 Colquiri Operations Report of December 2014, **R-469**, tab "Produccion," row 138.

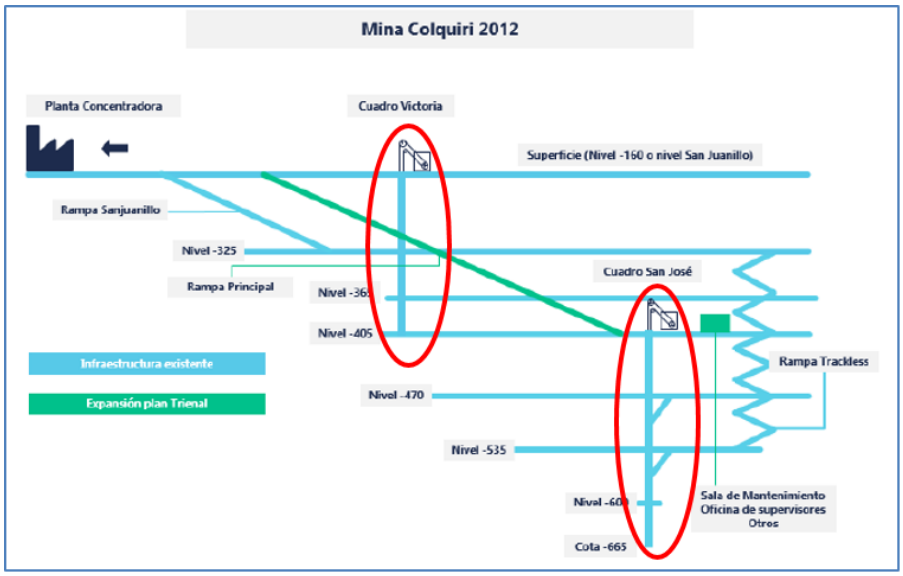
615 2012-2014 Colquiri Mine Three-year Plan, **C-108**, p. 107 of PDF, Table 47.

616 Colquiri first quarter analysis, **C-326**, p. 7.

617 Statement of Defence, Sections 7.1.2 and 7.3.4.

618 [redacted]

408. In an attempt to respond to Bolivia's demonstration of the Mine's bottlenecks, in his third witness statement, Mr Lazcano presents his own graph of the Mine's underground levels and transport infrastructure as of the reversion date (shown in blue):[619]



409. The Parties agree that, as of the reversion date:

- For the most part, additional mineralized material would come from levels below -405.[620] This is explained by the fact that the *cooperativistas* had pushed Colquiri's employees to the deeper levels of the Mine, and also because, after several decades of production, Colquiri had almost depleted the higher levels.

- Mineral ores extracted from levels below -405 could only be transported to the surface through the **San José winze**,[621] which went from level -405 to deeper levels (the trackless ramp, shown at the right side of the graph, was used to transport employees and light equipment);[622]

- From level -405 ore could only be transported to the surface (level -160) using the **Victoria winze**[623] (Colquiri did not operate the Sanjuanillo ramp, which connected

619 Lazcano III, ¶ 31.

620 RPA II, ¶ 61; Lazcano III, ¶¶ 34, 37, 38.

621 Lazcano III, ¶ 37.

622 Lazcano III, ¶ 41.

623 RPA II, ¶ 57.

level -325 to the Mine surface, because level -325 had been assigned to the *Cooperativa 26 de Febrero*);[624] and

- Colquiri had recently begun building the Main Ramp (shown in green) to connect level -405 to the surface[625] ([redacted] only 30 meters – out of the 2,560 meters – of this ramp had been built by the reversion date).[626] As explained above, while, in his first witness statement, Mr Lazcano said the Main Ramp was necessary to increase production to 390,000 MT by 2013,[627] Mr Lazcano now says the opposite (and that the Victoria winze could transport such amount of material by itself).[628]

410. Therefore, as of the reversion date, extraction of mineralized material was wholly dependent on the San José and Victoria winzes. Any increase in extraction levels was subject to the capacity and limitations of these winzes, which, as described in more detail below, are bottlenecks that make it physically impossible to reach Claimant's projected extraction levels (and, therefore, its projected production levels).

411. *In limine*, it is important to bear in mind the history of production at Colquiri:

- If, as Mr Lazcano now says, there was no need for the Main Ramp to increase production and tin prices reached a record high in 2011, why did Glencore never produced more than 356,178 MT before reversion? Simply because the Mine could not produce more.

  In the 2005-2011 period, Colquiri's actual extraction levels have always been below Claimant's forecasts (and Glencore was even forecasting a decrease in extraction levels since 2009):[629]

624 Lazcano III, footnote 37.

625 [redacted]; Lazcano III, ¶ 39.

626 [redacted]

627 Lazcano I, ¶ 27.

628 Lazcano III, ¶ 34.

629 Sinchi Wayra S.A. Monthly Report of December 2006, GB008999, **R-409**, p. 76; Sinchi Wayra S.A. Monthly Report of December 2007, GB010570, **R-410**, p. 7; Sinchi Wayra S.A. Monthly Report of December 2008, GB011021, **R-411**, p. 8; Sinchi Wayra S.A. Monthly Report of December 2009, GB011646, **R-412**, page 10; Sinchi Wayra S.A. Monthly Report of December 2010, GB012531, **R-413**, p.10; Sinchi Wayra S.A. Monthly Report of December 2011, GB012980, **R-414**, p. 10. See also DCF and Calculations (Colquiri), **EO-02**, Table 3, Colquiri – Historical Production.

Year	Actual	Forecasted
2005	356,178	375,001
2006	277,683	310,221
2007	310,714	317,124
2008	284,319	310,714
2009	241,997	320,519
2010	273,617	312,707
2011	280,383	310,312
Average	**289,270**	**322,371**

- After the reversion, as a result of Glencore's history of underinvestment in Colquiri, the State had to make substantial investments to maintain or replace the machinery necessary for extraction. [redacted][630]

  Despite the very different operating conditions *ex post* (as explained above, State-owned Colquiri almost tripled its number of employees[631] and invested substantial amounts of capital in exploration[632] and in replacing the obsolete San José winze,[633] among others – all of which Claimant's valuation ignores)[634], extraction levels at Colquiri only experienced a moderate increase post-reversion. During the 2013-2019

630 [redacted]

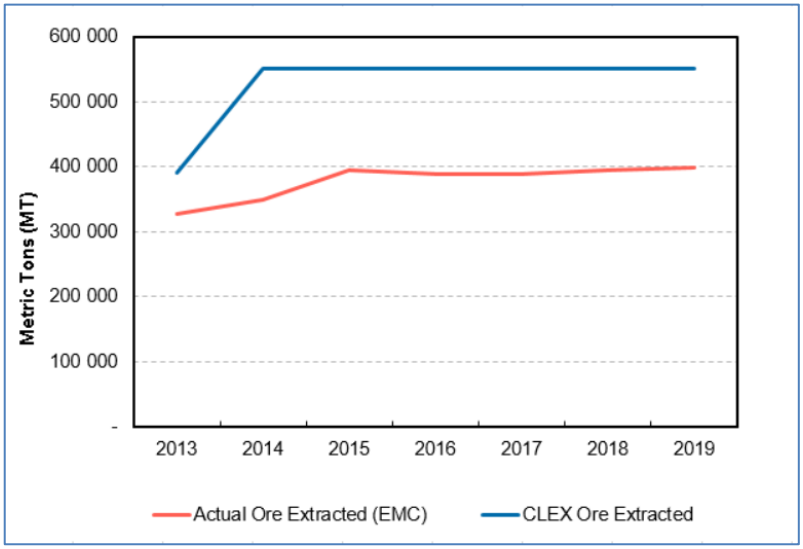
631 Quadrant II, footnote 51.

632 See Diamond Drilling Administrative Contract, COD. EMC-DJ-C-0123/2014 of 27 May 2014, **R-470**; Diamond Drilling Administrative Contract, COD. EMC-UAL-C-152/2019 of 6 June 2019, **R-471**.

633 [redacted] Compañía Minera Colquiri Summary of Investment Projects 2013- Nov 2017, **R-38**; Administrative Contract for the Acquisition of the Zitron Winch for the San José Winze of 11 November 2014, **R-449**; Technical Complementary Report for the Zitron Winch, INF/TEC-03/014 of 23 October 2014, **R-450**.

634 For instance, the Triennial Plan assumes that the purchase of the Zitron winze would only cost US $ 1.5 M, which is clearly insufficient. [redacted].

period, Colquiri extracted an annual average of 375,426 MT, much less than the annual average of 527,686 MT Claimant's valuation assumes for the same period:[635]



412. The limited increase in Colquiri's extraction levels *ex post* – despite the large investments made by the State – is the result of the Mine's bottlenecks, which persist to date.

First bottleneck: the San José winze (to transport production up to level -405)

413. It is not in dispute that the San José winze was the only system of extracting mineral ores from levels below -405. This continues to be the case to the present day. Because of its limited extraction capacity and fragile condition, the San José winze has always been an extraction bottleneck. [redacted]:

[redacted].[636]

414. [redacted][637]

635 Graph prepared by Counsel with data from 2020 RPA Model, January, 2020, **RPA-55 Bis**, tab "Colquiri Mine," row 24; Colquiri Operations Report of December 2013, **R-472**, tab "Produccion," row 133; Colquiri Operations Report of December 2014, **R-469**, tab "Produccion," row 138; Colquiri Operations Report of December 2015, **R-473**, tab "Produccion," row 146; Colquiri Executive Operations Report of December 2016, **R-474**, p. 7 of the pdf; Colquiri Executive Operations Report of June 2017, **R-416**, p. 6 of the pdf; Colquiri Executive Operations Report of December 2017, **R-417**, p. 8 of the pdf; Colquiri Executive Operations Report of December 2018, **R-451**, p. 14 of the pdf; Colquiri Executive Operations Report of December 2019, **R-452**, p. 11 of the pdf.

636 [redacted]

637 [redacted]

[redacted]

415. Aware of this, and of the fatal impact the San José bottleneck has on its alleged expansion plans (and, therefore, on its damages claim), Glencore's Reply strategically avoids the issue altogether. It is telling that the Reply does not once mention the San José winze. Instead, Glencore solely relies on Mr Lazcano's implausible testimony, who claims – with no support – that the San José winze would have not been a bottleneck because (i) it had capacity to transport, at least, 900 tpd (of which, supposedly, not even half was being used as of the reversion date – which defies logic, especially in a high price environment), and (ii) such capacity could be expanded by (a) replacing the existent winze by another one with more power, and (b) adding another *skip* to it.[638]

416. Even assuming (*arguendo*) that Mr Lazcano's testimony was accurate, it still does not address or explain how the San José winze could have extracted the 2,000 tpd assumed by Claimant's valuation (*i.e.*, more than double the 900 tpd calculated by Mr Lazcano). This is sufficient to dismiss this argument. In any case, it is also unsupported and wrong for, at least, four reasons.

417. *First*, Mr Lazcano does not provide any evidence to support his claim that the San José winze would have capacity to transport 900 tpd. He merely references exhibit **R-37**, which only shows certain characteristics of the winze. [redacted][639]

418. *Second*, Mr Lazcano's comments are disconnected from reality. He argues that the capacity of the winze **<u>could be</u>** expanded by a number of changes to the winze, none of which were contemplated by Claimant as of the reversion date. The only evidence Mr Lazcano submits of Claimant's alleged intention to 'expand' the San José winze's capacity is exhibit **R-34**, but this document only shows a "*stay in business*" investment in the winze of US $ 1.2 M (as opposed to an "*expansion investment*"). [redacted]

638 Lazcano III, ¶¶ 37-38.

639 [redacted]

[redacted][640] (which is consistent with contemporaneous Colquiri reports showing that the winze's engine was old and was experiencing technical problems on a regular basis).[641]

419. *Third*, it is false that the capacity of the San José winze could be easily expanded, as Mr Lazcano suggests, by replacing the existent winze (by another one with more power) and adding another *skip* to it.[642] [redacted]

[redacted][643]

420. Had it been possible to expand the capacity of the San José winze further, as Mr Lazcano contends, Glencore and State-owned Colquiri would have already done so.

421. *Fourth*, Mr Lazcano's analysis assumes that the San José winze works seamlessly and uninterruptedly at full nominal capacity at all times. This is demonstrably false. Historically, the San José winze has experienced, and continues to experience, mechanical problems, which limit the winze's working hours and the amount of material it can carry. This is confirmed by reports prepared before and after the reversion, excerpts of which are shown below:

> *[m]ine ore production was below the plan due to […] <u>the repair of the engine of the San José shaft</u> and some problems with the mining equipments.*[644] (August, 2011)
>
> *[…] se tuvo <u>problemas de orden mecánico</u> en los equipos de extracción vertical como son los cuadros Victoria y <u>San José</u> […].*[645] (February, 2013)

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640 [redacted]

641 See, for instance, Sinchi Wayra S.A. Monthly Report of August 2011, GB012767, **R-457**, p. 2 ("*Mine ore production was below the plan due to […] <u>the repair of the engine of the San José shaft</u> and some problems with the mining equipment*") (emphasis added).

642 Lazcano III, ¶¶ 37-38.

643 [redacted]

644 Sinchi Wayra S.A. Monthly Report of August 2011, GB012767, **R-457**, p. 2 (emphasis added).

645 Colquiri Executive Operations Report of February 2013, **R-475**, p. 1 (emphasis added) (unofficial translation: "*there were mechanical problems in the vertical extraction equipment such as the Victoria and San José shafts*").

> *Se presentaron problemas en el cuadro San José al quemarse los transformadores sin embargo ya se están tomando las medidas pertinentes para corregir este inconveniente*.[646] (June, 2013)
>
> *[…] continuo [sic] los problemas con el cuadro San José por los desperfectos en los transformadores*.[647] (July, 2013)
>
> *[…] Las actividades de producción mina no fueron normales por […] problemas en winche y parrilla -535 Cuadro San José […]*.[648] (February, 2017)

422. This is in addition to the many other circumstances and problems that limit the Mine's extraction levels. Below we cite additional excerpts from Colquiri reports showing this:

> *[m]ine ore production and ore treatment were below than plan due to lower availability of some mining equipment*.[649] (January, 2006)
>
> *Mine ore production and ore treatment were below than plan due to mechanical problems with mining equipment […]*.[650] (March, 2006)
>
> *Mine ore production was below budget due to mechanical problems in underground equipment […]*.[651] (May, 2008)
>
> *Mine ore production was below budget due to the loss of three days of production because of social conflicts. Also, we had mechanical problems with drilling and extraction equipment due to delay in supply of spares*.[652] (June, 2009)
>
> *Mine ore production was below budget because of […] mechanical problems with underground equipment […]*.[653] (August, 2009)
>
> *Mine production was slightly below budget due to assemblies organized by the union and low availability of loading and extraction equipment, to solve these problems a major repair plan is in progress. Plant treatment was below plan due to lack of ore […]*.[654] (October, 2009)
>
> *Mine ore production was below the budget because of […] mechanical problems in the mining equipment*.[655] (March, 2010)

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646 Colquiri Executive Operations Report of June 2013, **R-476**, p. 1 (emphasis added) (unofficial translation: "*There were problems in the San José shaft when the transformers burned, however, appropriate measures to correct this inconvenience have been implemented*").

647 Colquiri Executive Operations Report of July 2013, **R-477**, p. 1 (emphasis added) (unofficial translation: "*the problems with the San José shaft continued because of the flaws in the transformers*").

648 Colquiri Executive Operations Report of February 2017, **R-478**, p. 2 (emphasis added) (unofficial translation: "*Production activities in the mine were not normal due to […] problems in the winze and grill -535 of the San José shaft*").

649 Sinchi Wayra S.A., Investments, March 2012, GB013973, **R-454**, p. 2 (emphasis added).

650 Sinchi Wayra S.A. Management Report of March 2006, GB007318, **R-444**, p. 2 (emphasis added).

651 Sinchi Wayra S.A. Monthly Report of May 2008, GB010796, **R-479**, p. 2 (emphasis added).

652 Sinchi Wayra S.A. Monthly Report of June 2009, GB011311, **R-458**, p. 2 (emphasis added).

653 Sinchi Wayra S.A. Monthly Report of August 2009, GB011410, **R-459**, p. 2 (emphasis added).

654 Sinchi Wayra S.A. Monthly Report of October 2009, GB011544, **R-460**, p. 2 (emphasis added).

655 Sinchi Wayra S.A. Monthly Report of March 2010, GB011796, **R-461**, p. 2 (emphasis added).

Mine production and ore treatment were below the plan due to a day lost because of the lack of compressed air due to the break of the main pipe. The pipe was affected for the blasting works carried out by the 'cooperativistas' in the main area. We also had some problems with the underground equipment.[656](May, 2010)

Mine production was below the plan due to workers' absences and mechanical problems of the mining equipment.[657] (October, 2011)

423. A 2010 Sinchi Wayra report highlighted other recurrent equipment problems that led to halts in production (such as the lack of spare parts), so it is simply not credible that the San José winze could have operated uninterruptedly as Mr Lazcano contends:

> La mina se encuentra preparada para poder incrementar su producción, el problema principal por el cual no se puede lograr estas metas es por que la infraestructura del cuadro Victoria no lo permite, actualmente el cuadro se encuentra en su máxima capacidad distribuida en la extracción de mineral, caja, transporte de materiales y personal. La estructura de madera del cuadro se encuentra dañada por el tiempo de servicio.
> Se debe construir un Cuadro paralelo al Cuadro Victoria, que tenga mayor capacidad de extracción y poder garantizar el transporte de equipo pesado a niveles inferiores.
> Otra limitante es la baja disponibilidad de los equipos de mina (scoops y volquetas), se tiene paradas frecuentes por falta de repuestos y por falta en la capacidad de solucionar los problemas mecánicos, producto de la desvinculación del personal de supervisión capacitado y la falta de designación de un superintendente de mantenimiento.
> Se requiere contar con los servicios de terceros para realizar el mantenimiento de los equipos, logrando así las eficiencias requeridas.

424. For the foregoing reasons, the Tribunal should dismiss Mr Lazcano's theoretical explanations and consider the San José winze's limitations that make it impossible to reach Claimant's projected extraction levels.

Second bottleneck: the Victoria winze

425. Moving upwards inside the Mine, as of the reversion date, once mineral ores reached level -405 through the San José winze, they could only be extracted to the surface through the Victoria winze. This is the second major bottleneck inside the Mine. [redacted]

[redacted].[658]

656 Sinchi Wayra S.A. Monthly Report of May 2010, GB011896, **R-462**, p. 2 (emphasis added).

657 Sinchi Wayra S.A. Monthly Report of October 2011, GB012867, **R-464**, p. 2 (emphasis added).

658 [redacted]

426. [redacted][659]

427. Relying, once again, on the naked testimony of Mr Lazcano, Glencore argues that (i) the Victoria winze could transport more than 390,000 MT per year, thus would have been able to sustain the extraction levels assumed by Claimant's valuation for 2012 (360,000 TM) and 2013 (390,000 TM),[660] and (iii) that, by 2014, the Main Ramp connecting level -405 to the Mine surface would have been built, allowing the increase of transport capacity to 550,500 MT per year.[661]

428. *First*, Mr Lazcano's statements regarding the alleged capacity of the Victoria winze are unsupported and, in any event, are demonstrably false for, at least, four reasons.

429. One, Mr Lazcano has materially changed his testimony. While, in his first witness statement, Mr Lazcano stated that "*[e]l objetivo luego era llegar en 2013 a extraer 390.000 toneladas al año* ***mediante la construcción de una rampa principal***,"[662] in his third witness statement he claims that "*para alcanzar estos niveles de extracción [in 2012 and 2013]* ***no era necesario construir la Rampa Principal, sino que la infraestructura que ya teníamos en la Mina de Colquiri era suficiente***."[663] In other words, Mr Lazcano first declared that the Main Ramp was necessary to extract 390,000 MT, and now states the opposite.

430. The change in Mr Lazcano's testimony is instrumental to Claimant's inflated valuation as, per Claimant's own case, the Main Ramp would not have been built by 2013, thus making it impossible to reach the increased extraction levels forecasted by Claimant for that year. This modification highlights Mr Lazcano's lack of credibility.

431. Two, Glencore's contemporaneous documents confirm that, before the reversion, the Victoria winze was already working at full capacity.[664] A Sinchi Wayra report prepared in 2010, when Colquiri's annual extraction levels averaged 278,678 MT[665] (*i.e.*, 77% of the extraction level

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659 [redacted]

660 Lazcano III, ¶ 36.

661 Lazcano III, ¶ 39.

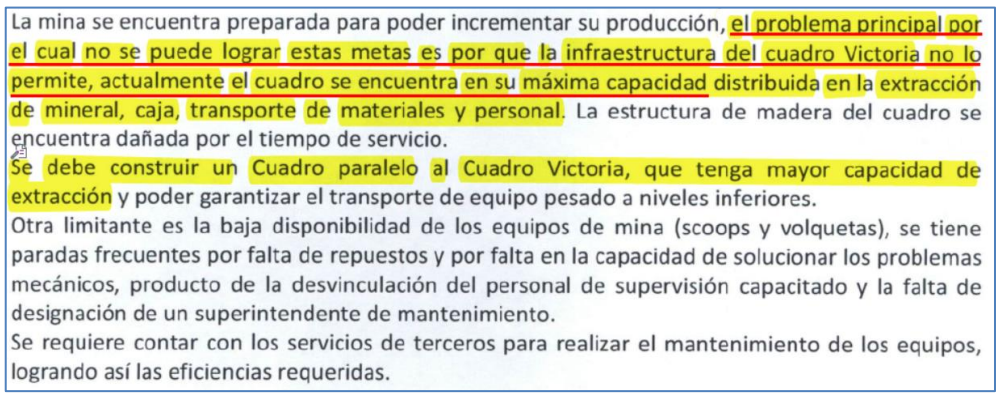
662 Lazcano I, ¶ 27 (emphasis added) (unofficial translation: "*[the] objective was to reach, in 2013, a level of 390,000 tonnes per year through the construction of a main ramp*").

663 Lazcano III, ¶ 34 (emphasis added) (unofficial translation: "*to attain these extraction levels [in 2012 and 2013] it was not necessary to build the Main Ramp, the infrastructure we already had at the Colquiri Mine was enough*").

664 [redacted]

665 Average for the period 2006-2009. See: Sinchi Wayra S.A. Monthly Report of December 2006, GB008999, **R-409**, p. 76; Sinchi Wayra S.A. Monthly Report of December 2007, GB010570, **R-410**, p. 7; Sinchi Wayra S.A. Monthly Report

assumed by Claimant in 2012, 71% compared to 2013 and 50% compared to 2014), states that:[666]



La mina se encuentra preparada para poder incrementar su producción, el problema principal por el cual no se puede lograr estas metas es por que la infraestructura del cuadro Victoria no lo permite, actualmente el cuadro se encuentra en su máxima capacidad distribuida en la extracción de mineral, caja, transporte de materiales y personal. La estructura de madera del cuadro se encuentra dañada por el tiempo de servicio.
Se debe construir un Cuadro paralelo al Cuadro Victoria, que tenga mayor capacidad de extracción y poder garantizar el transporte de equipo pesado a niveles inferiores.
Otra limitante es la baja disponibilidad de los equipos de mina (scoops y volquetas), se tiene paradas frecuentes por falta de repuestos y por falta en la capacidad de solucionar los problemas mecánicos, producto de la desvinculación del personal de supervisión capacitado y la falta de designación de un superintendente de mantenimiento.
Se requiere contar con los servicios de terceros para realizar el mantenimiento de los equipos, logrando así las eficiencias requeridas.

432. This Glencore document shows that:

- the Victoria winze was already working at full capacity in 2010 ("*el cuadro se encuentra en su máxima capacidad*"), when its annual extraction rate averaged 278,678 MT (period 2006-2009). Therefore, Claimant cannot seriously contend that the Victoria winze could support by itself – *i.e.*, without the Main Ramp – an annual extraction rate of 390,000 MT; and

- a new shaft would be needed to increase extraction levels. Compass Lexecon's valuation ignores the need for this new shaft. It does not consider the cost of building it or the time that this would have taken.

433. Three, the reverse engineering calculations made by Mr Lazcano to support the Victoria winze's alleged 390,000 MT capacity are, to say the least, absurd, just as the parameters underlying them:[667]

- The Mine's safety regulations prohibit to fill 100% of the skip because this would be extremely dangerous. [redacted]

[redacted]

of December 2008, GB011021, **R-411**, p. 8; Sinchi Wayra S.A. Monthly Report of December 2009, GB011646, **R-412**, p. 10. See also DCF and Calculations (Colquiri), **EO-02**, Table 3, Colquiri – Historical Production.

666 Colquiri S.A. Mine Evaluation and Projections Report, September 2009-January 2010, GB006663 of 8 September 2009, **R-436**, p. 7 (emphasis added) (unofficial translation: "*The mine is ready to increase its production, the main problem why these goals cannot be accomplished is because the infrastructure of the Victoria winze does not allow it, it is currently at its maximum capacity distributed between the extraction of mineral, box, transport of supplies and personnel. The wooden structure of the winze is damaged due to service time. A winze parallel to the Victoria winze must be built, with higher extraction capacity and to ensure the transport of heavy equipment to inferior levels […]*").

667 Lazcano III, ¶ 36 and footnotes 46-47.

[redacted].[668]

- While unloading the skip may take 20 seconds, loading takes much longer. Mr Lazcano appears to forget that, during the loading process, oftentimes rocks get stuck and must be removed manually. On average, loading the rocks takes approximately 30 to 40 seconds;[669] and

- A round trip (which includes loading the rocks into the skip, taking it to the surface, unloading the rocks and receiving the empty skip back at level -405) takes much longer than the 185 seconds assumed by Mr Lazcano. Here, again, Mr Lazcano ignores the aforementioned problems as well as security protocols.[670]

434. Four, Mr Lazcano's analysis assumes that the Victoria winze works seamlessly and uninterruptedly at full nominal capacity "*al menos 14 horas por día*".[671] This is false. Historically, the Victoria winze, its bearings, its skips, etc., have experienced, and continue to experience, recurrent mechanical and electrical failures, which limit the winze's working hours and the amount of material it can transport. This is confirmed by Colquiri reports prepared both before and after the reversion, excerpts of which are shown below:

> *[m]ine ore production was below Budget due to problems in a main bearing of the Victoria shaft, which was solved after ten days*[672] (April, 2008)
>
> *Mine ore production was slightly lower than budget due to some problems in the Victoria shaft (main at the mine)*[673] (November, 2008)
>
> *Mine ore production and plant treatment were below the budget due to problems in the extraction main shaft; a plate of the skip was broken affecting almost 25 meters of the wood structure*[674] (November, 2009)
>
> *Mine ore production was slightly below the budget due to mechanical problems in the mining equipment, the skip of the main shaft […]*[675] (February, 2010)

668 [redacted].

669 [redacted]

670 [redacted]

671 Lazcano III, footnote 46 (unofficial translation: "*at least 14 hours per day*").

672 Sinchi Wayra S.A. Monthly Report of April 2008, GB010748, **R-480**, p. 2 (emphasis added).

673 Sinchi Wayra S.A. Monthly Report of November 2008, GB010973, **R-481**, p. 2 (emphasis added).

674 Sinchi Wayra S.A. Monthly Report of November 2009, GB011594, **R-482**, p. 2 (emphasis added).

675 Sinchi Wayra S.A. Monthly Report of February 2010, GB011746, **R-483**, p. 2 (emphasis added).

> *[…] se tuvo problemas de orden mecánico en los equipos de extracción vertical como son los cuadros Victoria y San José por ser de data antigua […]*[676] (February, 2013)
>
> *[…] Las actividades de producción mina no fueron normales […] reparación eléctrica del cuadro Victoria […]*[677] (September, 2018)

435. This is in addition to the many other problems that limit the Mine's extraction levels, illustrated above.

436. *Second*, it is false that the Main Ramp would have been built by the end of 2013 but for the reversion and, in any case, that such ramp – together with the Victoria winze – could have transported 550,550 MT per year (from level -405 – assuming *arguendo* that the San José winze could have taken so much ore to level -405 – to the surface) by 2014[678] for, at least, three reasons.

437. One, Mr Lazcano assumes that the construction of the Main Ramp would have taken 15 months.[679] This is, once again, unrealistic. Glencore's own contemporaneous documents show longer timeframes.[680] The construction of the Main Ramp took, in reality, several years.[681]

438. Two, *ex post* data confirms that the Victoria winze and the Main Ramp cannot transport 550,579 TM per year. The Main Ramp was built in 2017 at a cost of US $ 11.6 M,[682] as opposed to the US $ 4.2 M considered in Claimant's valuation.[683] Despite this and the post-

676 Colquiri Executive Operations Report of February 2013, **R-475**, p. 1 (emphasis added) (unofficial translation: "*there were mechanical problems with the vertical extraction equipment such as the Victoria and San José shafts because they are old*").

677 Colquiri Executive Operations Report of September 2018, **R-484**, p. 2 (emphasis added) (unofficial translation: "*Mine production activities were not normal […] electrical reparation of the Victoria shaft*"). The same problem is reported in the monthly reports from October 2018 to December 2019.

678 Lazcano III, ¶ 39.

679 Lazcano III, footnote 56.

680 Colquiri Mine Expansion Project, **C-324**, p. 7 ("*El tiempo determinado por la Compañía es 20 meses*").

681 [redacted]

682 [redacted]

683 Claimant's valuation considers US $ 5'915,000 as expansion CAPEX for "Mine equipment and development." See 2020 RPA Model, January, 2020, **RPA-55 Bis**, tab "Capex," rows 18 and 26. While RPA does not indicate how much of this would be for the construction of the Main Ramp, contemporaneous documents suggest Glencore considered that amount to be US $ 4'275,000. See Colquiri S.A., Mine Expansion Project, GB013681, **R-453**, p. 2.

reversion investments made by the State to improve the performance of the Victoria winze,[684] Colquiri's 2017-2019 average extraction rate has been 400,000 MT per year.[685]

439. Three, even if the Victoria winze and the Main Ramp could transport 550,579 MT per year from level -405 to the Mine surface (which is not the case), that would not solve the problem posed by the limited capacity of the San José winze (first bottleneck in the extraction process) to transport ores from lower levels to level -405. As shown above, it is Claimant's case that production would come from levels below -405.[686] Given that most of the mineral ore would be extracted from below the -405 level, the Mine's extraction rate would have been effectively capped by the San Jose winze's extraction capacity, as happens in reality.

440. For the foregoing reasons, the Tribunal shall dismiss Mr Lazcano's new theory based on reverse engineering and conclude that the Victoria winze and/or the Main Ramp could not support Glencore's exaggerated projected extraction levels.

b) Claimant's updated ore processing forecasts ignore the limitations of both the Mine and the Plant

441. Claimant's valuation also assumes "*the expansion of the processing capacity of the Concentrator Plant from 1,000 to 2,000 tonnes per day to be able to process the 550,000 tonnes of ore that would be extracted from the Mine each year beginning in 2014*."[687] This assumption is unrealistic, both as to the increase in processing levels and the timing for such increase, for the following five reasons:

442. *First*, the Plant's processing levels do not only depend on its processing capacity but also on the Mine's extraction levels (since the Mine feeds the Plant). Given that, as explained above, the Mine's bottlenecks make it impossible to reach the 550,550 MT annual extraction rate assumed by Claimant, it would be equally impossible for the Plant to reach an annual processing rate of 2,000 tpd or 550,550 tpy.

443. As evidence of how far-fetched Claimant's projections are, Colquiri reports (both before and after the reversion) show that, at much lower ore processing levels than forecasted by Claimant, the Plant has already lacked sufficient mineral ore feed to process:

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684 Colquiri Executive Operations Report of September 2018, **R-484**, p. 1; Colquiri Executive Operations Report of January 2019, **R-485**; Colquiri Executive Operations Report of December 2019, **R-452**.

685 Colquiri extracted 424,035 MT in 2017, 392,408 MT in 2018 and 385,670 MT in 2019. See Colquiri Executive Operations Report of June 2017, **R-416**, p. 6 of the pdf; Colquiri Executive Operations Report of December 2017, **R-417**, p. 8 of the pdf; Colquiri Executive Operations Report of December 2018, **R-451**, p. 14 of the pdf; Colquiri Executive Operations Report of December 2019, **R-452**, p. 11 of the pdf.

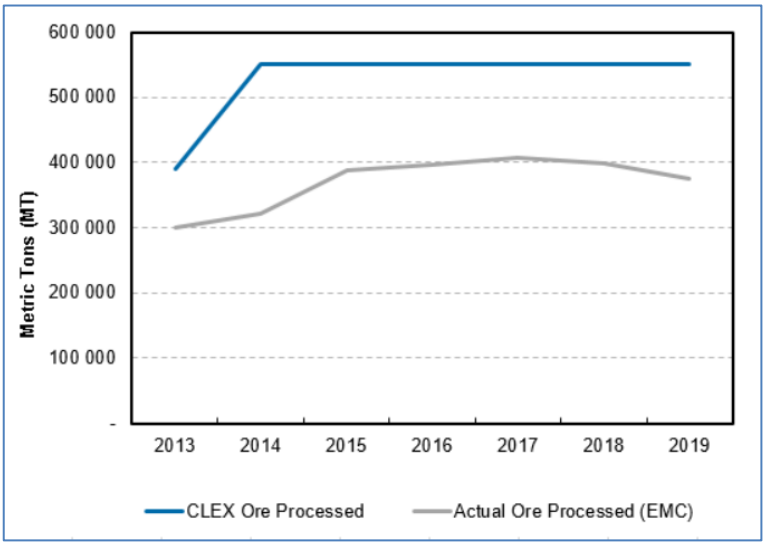
686 RPA II, ¶ 57; Lazcano III, ¶¶ 34, 37-38.

687 Reply on Quantum, ¶ 75 (c) (emphasis added).

[o]re treatment in the mil was below Budget due to the lack of mine ore[688] (February, 2009)

Mine production was slightly below budget due to assemblies organized by the union and low availability of loading and extraction equipment, to solve these problems a major repair plan is in progress. Plant treatment was below plan due to lack of ore […][689] (October, 2009)

444. *Second*, despite all the investments made *ex post* by State-owned Colquiri to increase the Plant's ore processing levels (with an investment of US $ 2 M approx.[690]), between 2013 and 2019 the Plant has only processed an annual average of 369,960 MT (grey line in the graph below), *i.e.*, 30% less than the annual average of 527,686 MT assumed by Claimant during this same period (blue line):[691]



445. This only confirms, once again, how unreasonable Claimant's Plant processing forecast is.

446. *Third*, Glencore's processing forecasts assume that the Plant works seamlessly and uninterruptedly at full nominal capacity all the time.[692] This is demonstrably false. Historically, the Plant's mill has experienced, and continues to experience, mechanical failures which affect the Plant's processing levels, as illustrated by Colquiri's reports:

688 Sinchi Wayra S.A. Monthly Report of February 2009, GB011117, **R-486**, p. 2 (emphasis added).

689 Sinchi Wayra S.A. Monthly Report of October 2009, GB011544, **R-460**, p. 2 (emphasis added).

690 Compañía Minera Colquiri Summary of Investment Projects 2013- Nov 2017, **R-38**; [redacted]

691 Compass Lexecon II, ¶23; Graph prepared by Counsel with data from RPA-55Bis, tab "Colquiri Mine," row 52; Summary of Monthly Metallurgical Balance, Certificates of Plant Operation Chemical Grades, and Monthly Reports of Minerals Movement, **R-41**, pp. 4-7 of the pdf; Colquiri Executive Operations Report of June 2017, **R-416**, p. 6 of the pdf; Colquiri Executive Operations Report of December 2017, **R-417**, p. 8 of the pdf; Colquiri Executive Operations Report of December 2018, **R-451**, p. 14 of the pdf; Colquiri Executive Operations Report of December 2019, **R-452**, p. 11 of the pdf.

692 Lazcano III, footnote 46.

> *[t]he Colquiri mill throughput was lower than the plan due to a longer stop of the plant which was required for maintenance work of SAG mill*.[693] (April, 2007)
>
> *Plant treatment was below budget due to the same reason of the mine area and the change of the pinion shaft of the SAG mill*.[694] (July, 2009)
>
> *Plant treatment was below budget due to a work day lost and because we had to lower the set point of the mill due to poor quality of the trial steel balls*.[695] (August, 2009)
>
> *Plant treatment was below the plan due to mechanical problems in the regrinding mill […]*.[696] (November, 2010)

447. This is in addition to the many other problems that limit the Mine's extraction levels and, as a result, the Plant's processing levels (discussed further above).[697]

448. *Fourth*, Mr Lazcano claims that, by the reversion date, Glencore had already advanced in the design of two thickening tanks (and two other tanks for clear water) and obtained the additional zinc flotation cells that would allow to increase the Plant's processing capacity to the levels forecasted by Claimant.[698] This is, to say the least, misleading.

449. The 2012 Investment Plan referred to by Mr Lazcano indicates only that the flotation cells had been budgeted for (not that Sinchi Wayra had already obtained them) and, more importantly, it groups these and other related investments as part of the "*Proyecto que permitirá incrementar la capacidad de Planta Concentradora de 1000 TMS a 1300 TMS*."[699] Therefore, there is no evidence that, as of the reversion date, Glencore had planned to increase the Plant's processing capacity to 2,000 tpy (needed by Claimant to support its valuation) or that such increase could be achieved in reality. [redacted]"[700]

450. *Fifth*, Claimant's assumption that, but for the reversion, the Plant would have been processing 2.000 tpd already by 2014 is disproved by other documents submitted by Claimant in this arbitration. For instance, a report prepared, at Claimant's request, by consultants from

693 Sinchi Wayra S.A. Monthly Report of April 2007, GB009835, **R-487**, p. 2 (emphasis added).

694 Sinchi Wayra S.A. Monthly Report of July 2009, GB011360, **R-488**, p. 2 (emphasis added).

695 Sinchi Wayra S.A. Monthly Report of August 2009, GB011410, **R-459**, p. 2 (emphasis added).

696 Sinchi Wayra S.A. Monthly Report of November 2010, GB012281, **R-489**, p. 2 (emphasis added); an identical problem is reported in Sinchi Wayra S.A. Monthly Report of December 2010, GB012531, **R-413**, p. 2.

697 For further details, see section above discussing the "First bottleneck: the San José winze."

698 Lazcano III, ¶ 46.

699 *Compañía Minera Colquiri* Investment Plan for 2012, **R-34**, rows 343-351 (emphasis added).

700 [redacted].

Holland and Holland in September 2011 shows that an expansion of the Plant would have taken, at least, "*a nominal 3-4 year period […]*."[701] Therefore, even assuming *arguendo* that the Plant's expansion works started in 2012, these works could only have been completed by 2015-2016 (and this is a nominal period, so most likely to be extended).

451. For the foregoing reasons, the Tribunal shall dismiss Glencore's assumption that, but for the reversion, the Plant would have processed a staggering 2,000 tpd by 2014.

c) Claimant's updated production forecasts ignore the water and energy limitations in the Colquiri area

452. Claimant's valuation assumes that, but for the reversion, by 2014 the Mine would have been processing (i) 2,000 tpd as a result of the implementation of the Triennial Plan and (iii) 3,000 tpd as result of the implementation of the Old Tailings Project. Therefore, in total, Claimant's valuation assumes that, by 2014, the Mine would have been processing 5,000 tpd and more than 1'400,000 tpy.[702] While the Old Tailings Project is discussed, in more detail, in Section 4.1.4 below, Claimant's ore processing projections in relation to this Project are also considered here as they have a direct impact on water and energy needs.

453. The Parties agree that, "*as additional production capacity is added in a mining operation, additional power and water are also required*."[703]

454. In its Statement of Defence, Bolivia demonstrated that it would be physically impossible to obtain sufficient water and energy in the Colquiri area to sustain production levels of 5,000 tpd. [redacted][704]

701 Report on the expansion of Colquiri and Bolivar Concentrator Operations of Sinchi Wayra SA, Holland and Holland Consultants, **C-323**, p. 12.

702 RPA II, ¶ 169.

703 RPA II, ¶ 164; SRK I, ¶ 57.

704 [redacted].

455. Claimant denies the above, but its arguments are meritless for, at least, four reasons:

456. *First*, it is Claimant's burden to establish, with certainty, where all the water and energy needed to sustain its staggering 5,000 tpd / 1'500,000 tpy production would be sourced from. As discussed below, Claimant has not satisfied this burden.

457. *Second*, Claimant relies on the naked opinion of RPA, according to whom there would be enough water and energy to sustain the production levels forecasted by Claimant.[705] But RPA, contrary to SRK, did not even visit the Mine site and, therefore, ignores the real-life problems faced by Colquiri to obtain water and energy for its operations. RPA's opinion is limited to stating it has reviewed the Triennial Plan and believes reasonable considerations were made to supply expanded production with sufficient water and energy:

- Regarding water, RPA simply states that "*RPA has reviewed the assumptions for water supply in the Triennial Plan and is of the opinion that there is sufficient water to run the Combined Operation*;"[706] and

- Regarding power, RPA simply states that "*we have reviewed the Triennial Plan and confirm that reasonable considerations have been made to supply expanded operation with sufficient power*."[707] It further states that "*the section on power (Section 5.5) [of the Triennial Plan] specifically references the ability to meet the needs of future ore processing capacity of up to 5,300 tpd of ore processed*."[708]

458. This is clearly insufficient. RPA makes no real (nor independent) assessment of water / energy limitations at Colquiri and simply relies on a piece of paper called the Triennial Plan (which was never approved nor grounded on social and environmental analyses[709]). Furthermore, because the Triennial Plan does not consider the Old Tailings Project, any considerations regarding water and energy included in such Plan are necessarily limited to a production of 2,000 tpd and cannot support an expansion to 5,000 tpd.

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705 RPA II, ¶ 171.

706 RPA II, ¶ 166 (emphasis added).

707 RPA II, ¶ 168 (emphasis added).

708 RPA II, ¶ 170 (emphasis added).

709 In the document production phase of this arbitration, Bolivia requested Glencore to produce "*social and/or environmental studies required for and/or related to the Triennial Plan's implementation […]*." See Annex 2 to Procedural Order No. 9 of 30 September 2019, Request No. 4.f, p. 25. In response, Glencore did not produce any study.

459. *Third*, as explained by SRK, who visited the Mine site and its surroundings, there is simply not enough water in the Colquiri area to sustain Glencore's high production forecasts. As explained by SRK:

> *[t]he site water balance demonstrates that water availability locally and regionally is a major challenge. There are periods when there is not enough water to sustain the operations. The mine water supply comprises 95% recycled water from the tailings dam plus 5% makeup water. The mine produces only 20 liters per second from the underground workings which is low and is used in the mine for dust suppression and other purposes. By far the largest consumer of water is the process plant. The town of Colquiri with a population of ~21,000, is also a major consumer of water. There is barely sufficient water to support an expanded production rate of 2,000 tpd and this remains a serious risk to expansion. There is certainly insufficient water to support an additional 3,000 tpd tailings reprocessing operation as proposed by RPA. It is possible that the shortage of water is one of the main reasons why historically at Colquiri more aggressive expansion plans have not been pursued*.[710]

460. *Fourth*, Glencore ignores the energy and water shortages that have historically affected (and continue to affect) Coquiri's operations and, as a result, its production levels.

461. On the one hand, Claimant ignores the electrical shortages and power cuts that affect Coquiri's Mine and Plant operations on a regular basis, as reported in several Colquiri reports prepared both before and after the reversion:

> *[p]lant treatment below Budget because of electrical shortages […]*.[711] (April, 2006)
>
> *During the month of May, the plant treated 19,870 tonnes of ore [i.e., less than 662 tpd on average], 24% below budget due to lost hours for electrical shortages […], which created almost one week lost of operations*.[712] (May, 2006)
>
> *Mine production was below budget because of […] external power cuts due to bad weather (winds and snowfall)*.[713] (July, 2009)
>
> *[…] debido a los constantes cortes intempestivos de energía del Sistema Integrado Nacional (SIN) afectando el proceso metalúrgico y el sistema de extracción tanto horizontal como vertical*.[714] (January, 2013)

462. On the other hand, Claimant ignores the water shortage problems that also affect Colquiri's operations on a regular basis, which are also reported in several Colquiri reports:

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710 SRK II, ¶ 42.

711 Sinchi Wayra S.A. Monthly Report of April 2006, GB007498, **R-490**, p. 66 (emphasis added).

712 Sinchi Wayra S.A. Monthly Report of May 2006, GB007754, **R-491**, p. 69 (emphasis added).

713 Sinchi Wayra S.A. Monthly Report of July 2009, GB011360, **R-488**, p. 2 (emphasis added).

714 Colquiri Executive Operations Report of January 2013, **R-492**, p. 1 (emphasis added) (unofficial translation: "*[…] due to the constant and sudden energy cuts coming from the National Integrated System (SIN) affecting the metallurgic process and the horizontal and vertical extraction systems*").

> *[t]he quality of the tin and zinc concentrates were <u>below budget due to lack of water for process</u> […].*[715] (October, 2007)
>
> *[…] <u>The lack of water for the process</u> is affecting the metallurgical performance.*[716] (October, 2011)
>
> *Las actividades de producción mina no fueron normales, por […] <u>falta de agua</u> y aire durante el mes.*[717] (May, 2017)

463. Neither the Triennial Plan nor Claimant's experts consider these shortages or their impact on production levels.

464. For the foregoing reasons, the Tribunal shall conclude that it would be impossible to obtain sufficient water and energy to sustain Claimant's exaggerated production forecasts. Instead, the Tribunal should rely on Bolivia's experts' more reasonable forecasts, according to whom – from the valuation date onwards – the Mine would produce at most 307,000 MT per year. This is consistent with historical production figures.

4.1.3.3 Contrary to the reality of the Mine and industry practice, Claimant's valuation continues to assume unduly high head grades and keeps them constant throughout the life of the Mine

465. Claimant's valuation assumes that, but for the reversion, the Mine's head grades would have reached historical maximums ("*1.29% Sn and 7.52% Zn*") just 6 months after the reversion, and such values would remain constant for the next 17 years, until the end of the Mine Lease.[718]

466. Bolivia demonstrated in its Statement of Defence that such head grades are unduly high, and the assumption that they would remain constant is contrary to common sense and industry practice.[719] Glencore's answers to Bolivia's criticisms should be dismissed for, at least, four reasons:

467. *First*, it is not in dispute that Claimant's assumed head grades are inconsistent with Colquiri's historical head grades. Historical head grades for tin and zinc averaged 1.25% and 7.16% between 2007 and 2011, respectively, but Claimant assumes – relying solely on the Triennial Plan – that they would reach historical maximums (1.29% for tin and 7.52% for zinc) just 6 months after the reversion, and remain unchanged ever after. This is unreasonable.

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715 Sinchi Wayra S.A. Monthly Report of October 2007, GB010482, **R-493**, p. 2 (emphasis added).

716 Sinchi Wayra S.A. Monthly Report of October 2011, GB012867, **R-464**, p. 2 (emphasis added).

717 Colquiri Executive Operations Report of May 2017, **R-494**, p. 2 (emphasis added) (unofficial translation: "*the activities of mine production were not normal, because of […] lack of water and air during the month*").

718 RPA II, ¶ 67.

719 SRK I, Section 7.3.3.

468. A reasonable and informed willing buyer as of the reversion date would have relied on historical data to forecast future head grades, just as Holland and Holland, Glencore's consultant, relied upon historical figures when assessing Glencore's expansion plans back in mid-2011.[720]

469. *Second*, Glencore's assumed head grades are inconsistent with its contemporaneous market disclosures, which show that, as of the reversion date, Glencore's expectation was that head grades would decrease over time. For instance, Glencore's 2012 Production Reports (which include data for the last months of operations of Colquiri) state that:

> *[t]he acquisition of Rosh Pinah (from 1 June 2012) and a strong performance by AR Zinc resulted in higher production […]. This was offset by lower production at Los Quenuales and Sinchi Wayra, as a result of the planned shift towards lower grade ore bodies.*[721]
>
> *[…] zinc concentrates from own sources was down 18% principally reflecting lower grades at Sinchi Wayra […].*[722]

470. *Third*, Glencore's expectation of lowering grades was consistent with the natural decrease of head grades as mining goes deeper in Colquiri. As explained by Eng. Villavicencio:

> *[l]os que conocemos de metalurgia en Bolivia sabemos que la ley de los concentrados tiende a bajar a medida que las minas son explotadas a mayor profundidad. Esta disminución obedece a la disminución del elemento rico proveniente de las zonas mineras dedicadas a la explotación de casiterita (mineral de estaño SnO_2). Al ser un compuesto oxidado de estaño, es más rico en regiones superficiales oxidadas. A medida que la explotación pasa a zonas más profundas (que son más sulfurosas), la ley de cabeza va disminuyendo. Esto es consistente con cómo operan las minas (como Colquiri y Huanuni): primero extraen el mineral de mayor ley y, a medida que van agotando las reservas y recursos, van profundizando y extraen material de menor ley.*[723]

471. As Mr Lazcano and RPA acknowledge, most of the additional production assumed in Claimant's valuation would come from deeper levels of the Mine, below -405.[724]

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720 Report on the expansion of Colquiri and Bolivar Concentrator Operations of Sinchi Wayra SA, Holland and Holland Consultants, **C-323**, p. 9.

721 Glencore International Production Report 2012 of 12 February 2013, **R-495**, p. 4.

722 Glencore International IMS and First Quarter 2012 Production Report of 9 May 2012, **R-496**, p. 4 (emphasis added).

723 Villavicencio III, ¶ 70 (emphasis added) (unofficial translation: "*Those who know about metallurgy in Bolivia know that concentrates grade tends to decrease when the mines are exploited at greater depth. This decrease is due to the decrease in the rich element coming from the mining zones dedicated to the exploitation of casserite (tin mineral SnO2). Being an oxidized tin compound, it is richer in superficial oxidized regions. As exploitation goes to deeper zones (which are more sulfurous), head grade decreases. This is consistent with how mines operate (such as Colquiri and Huanuni): first, ore with the highest grade is extracted, and as reserves and resources start to deplete, they go deeper to extract lower grade ores*").

724 RPA II, ¶ 57, 61; Lazcano III, ¶ 34, 37-38.

472. *Fourth*, contrary to Glencore's contention, *ex post* data does not support its case on head grades.

473. *Ex post* data shows downward trend in head grades. For instance, while zinc head grades averaged 7.16% as of the reversion date[725] and Claimant's valuation assumes such grades would have increased to 7.52% by 2013 (remaining stable for the next 17 years), zinc head grades have, in reality, averaged 6.97% in the period 2013-2018,[726] consistent with Glencore's downward expectation in its 2012 Production Report.

474. For the foregoing reasons, the Tribunal should conclude that Glencore's assumed head grades are exaggerated and cannot be relied upon for the valuation of the Mine Lease. Instead, the Tribunal should rely on Bolivia's experts' more reasonable tin (1.17%) and zinc (6.70%) head grades, which are more consistent with Colquiri's historical averages.

4.1.3.4 Contrary to the reality of the Mine and industry practice, Claimant's valuation continues to assume unduly high metallurgical recovery rates and that they would remain constant throughout the life of the Mine

475. Claimant's valuation assumes that, but for the reversion, the Plant's metallurgical recovery rates would have reached historical maximums ("*of 72% for tin and 76% for zinc*") just 6 months after the reversion, and would remain constant for the next 17 years, until the end of the Mine Lease.[727]

476. Bolivia demonstrated in its Statement of Defence that these recovery rates are unduly high, and the assumption that they would remain constant throughout the Mine Lease runs contrary to common sense and industry practice.[728] Glencore's answers to Bolivia's criticisms are unsupported and should be dismissed for, at least, two reasons:

477. *First*, it is not in dispute that Claimant's assumed recovery rates are inconsistent with Colquiri's historical metallurgical recovery rates.[729] Historical recovery rates for tin and zinc averaged 64.07% and 69.24%, respectively, between 2007 and 2011,[730] but Claimant assumes – relying solely on the Triennial Plan – that they would have reached historical maximums

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725 Average for the period 2007-2011. Quadrant II, Figure 4.

726 Colquiri Operations Report of December 2013, **R-472**, tab "Production,", row, 135; Colquiri Operations Report of December 2014, **R-469**, tab "Production," row 140; Colquiri Operations Report of December 2015, **R-473**, tab "Production," row 148; Colquiri Executive Operations Report of December 2016, **R-474**, p. 7 of the pdf; Colquiri Head Grade Analysis Report 2017-2019 of 3 March 2020, **R-497**.

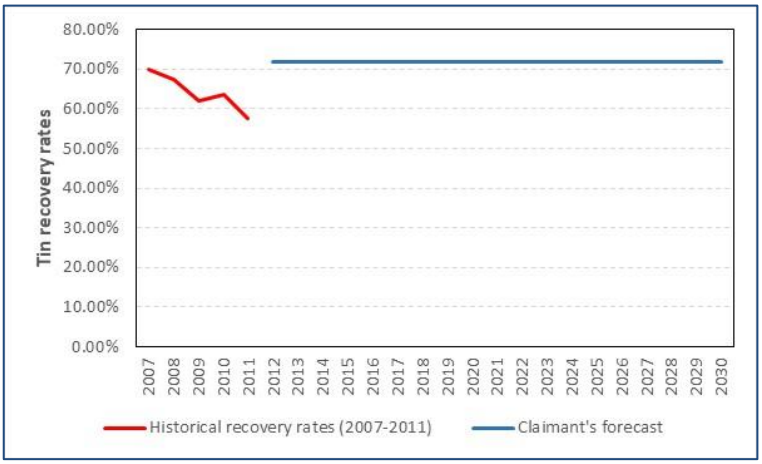
727 RPA II, ¶ 80.

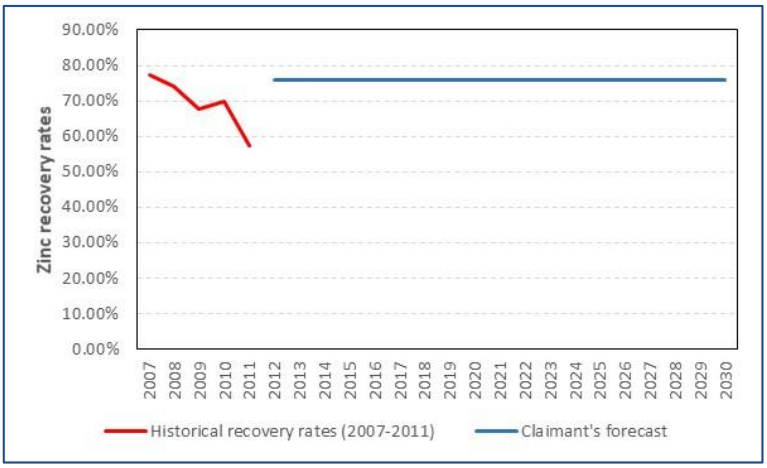
728 SRK I, Section 7.3.6.

729 This is acknowledged by RPA, who states that "*RPA recognizes that the tin and zinc recoveries leading up to 2012 were below the forecast recoveries*." See RPA II, ¶ 82.

730 Quadrant II, ¶ Figure 4.

"*of 72% for tin and 76% for zinc*" in 2012, and would have remained constant ever after,[731] as shown below:





478. Claimant's projection is clearly unreasonable. A willing buyer as of the reversion date would have relied upon historical data to forecast future recovery rates, just as Holland and Holland, Glencore's consultant, relied upon historical figures when assessing Glencore's expansion plans back in mid-2011.[732] This is further confirmed by the fact that, as explained by SRK, there was no analytical or testwork support as of the reversion date to project an increase in recovery rates:

> *RPA increased Metallurgical recoveries to 76% for zinc and to 72% for tin […]. <u>There is simply no rigorous analytical or testwork support for these improvements and certainly not in the long term for ore which has not yet been found by</u>*

731 Graph prepared by Counsel with data from 2020 RPA Model, January, 2020, **RPA-55 Bis**, tab "Colquiri Mine," rows 59-60; DCF and Calculations (Colquiri), **EO-02**, Table 3, Colquiri – Historical Production.

732 Report on the expansion of Colquiri and Bolivar Concentrator Operations of Sinchi Wayra SA, Holland and Holland Consultants, **C-323**, p. 9.

> *exploration. Typical testwork would have included, for example, bench scale, locked cycle tests, pilot plant and metallurgical simulation analysis.*[733]

479. *Second*, Glencore attempts to rely on *ex post* data to support its forecast, stating that "*actual tin recovery rates at the Colquiri Mine between 2012 to 2015 […] averaged 72% (the same rate projected by RPA), and Comibol's own expansion plans at the Colquiri Mine are in line with RPA's recovery assumption*."[734] These arguments are misleading and, in any event, wrong.

480. One, Glencore relies (i) solely on tin recovery rates (ii) during a very limited and carefully chosen period of time (2012-2015) to present a distorted view of reality. It suffices to review recovery rates for both tin and zinc during a longer *ex post* period (2012-2019) to confirm that, despite the investments made by State-owned Colquiri in the Plant (which amount to US $ 2 M approx.[735]), tin and zinc recovery rates remain below those forecasted by Glencore. Indeed, tin recovery rates averaged 70.25%[736] – in contrast to the 72% projected by Glencore – and zinc recovery rates averaged 63.66%[737] – in contrast to the 76% assumed by Glencore –, as shown below:

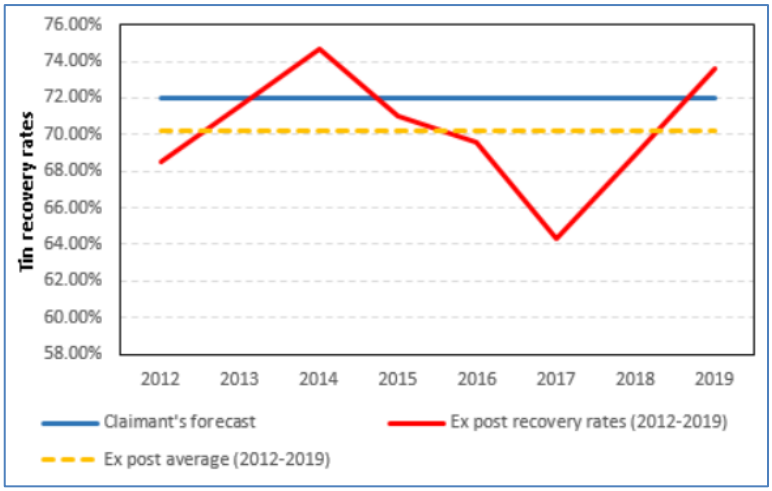
733 SRK I, ¶ 66 (emphasis added).

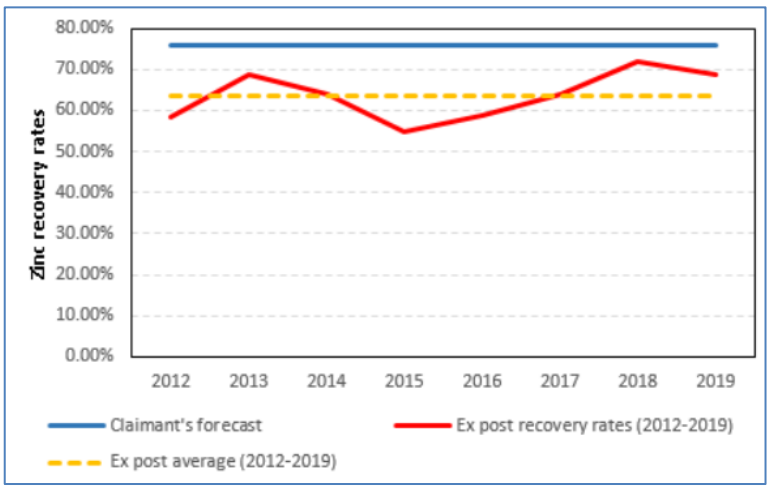
734 Reply on Quantum, ¶¶ 102.

735 Compañía Minera Colquiri Summary of Investment Projects 2013- Nov 2017, **R-38**; [redacted].

736 Graph prepared by Counsel with data from Colquiri Operations Report of December 2012, **R-498**, tab "H.S.I. Produccion," row 223; Colquiri Operations Report of December 2013, **R-472**, tab "Produccion," row 188; Colquiri Operations Report of December 2014, **R-469**, tab "Produccion," row 193; Colquiri Operations Report of December 2015, **R-473**, tab "Produccion," row 201; Colquiri Executive Operations Report of December 2016, **R-474**, p. 7; Colquiri Executive Operations Report of June 2017, **R-416**, p. 6 of the pdf; Colquiri Executive Operations Report of December 2017, **R-417**, p. 8 of the pdf; Colquiri Executive Operations Report of December 2018, **R-451**, p. 14 of the pdf; Colquiri Executive Operations Report of December 2019, **R-452**, p. 11 of the pdf.

737 Graph prepared by Counsel with data from Colquiri Operations Report of December 2012, **R-498**, tab "H.S.I. Produccion," row 221; Colquiri Operations Report of December 2013, **R-472**, tab "Produccion," row 186; Colquiri Operations Report of December 2014, **R-469**, tab "Produccion," row 191; Colquiri Operations Report of December 2015, **R-473**, tab "Produccion," row 199; Colquiri Executive Operations Report of December 2016, **R-474**, p. 7; Colquiri Executive Operations Report of June 2017, **R-416**, p. 6 of the pdf; Colquiri Executive Operations Report of December 2017, **R-417**, p. 8 of the pdf; Colquiri Executive Operations Report of December 2018, **R-451**, p. 14 of the pdf; Colquiri Executive Operations Report of December 2019, **R-452**, p. 11 of the pdf.





481. Two, Glencore's reliance on "*Comibol's own expansion plans*" is inapposite. The project referred to by Glencore (R-35) involves the construction of a new plant (currently ongoing) at a CAPEX of more than US $ 77 M, which was not contemplated by the Triennial Plan and is not considered in Claimant's valuation.[738] Claimant cannot seriously rely on a new Plant without considering the corresponding costs in its model. In any event, the recovery rates indicated in such document are maximum expected recoveries ("*las recuperaciones esperadas alcanzan a 75% en el zinc y 72% en el estaño*"),[739] not averages that – as Glencore arbitrarily assumes – would remain constant throughout an arbitrary 20-year LOM.

482. For the foregoing reasons, the Tribunal should conclude that Glencore's assumed recovery rates are exaggerated and cannot be relied upon for the valuation of the Mine Lease. Instead,

738 RPA II, ¶ 80 ("*[...] the Triennial Plan detailed significant capital to be invested to expand and improve the Mine Concentrator*", not to build a new plant).

739 Comprehensive Technical Economic Social and Environmental Study (TESA) for the Design of the New Mineral Concentration Plant with capacity 2000 tdp, Executive Summary, June 2015, **R-35**, p. 5 (emphasis added) (unofficial translation: "*expected recoveries attain 75% for zinc and 72% for tin*").

the Tribunal should rely on Bolivia's experts' more reasonable tin (65.54%) and zinc (69.61%) recovery rates, consistent with historical averages.

4.1.3.5 Claimant's updated valuation continues to rely on non-verified tin and zinc concentrate prices

483. In its first report, Quadrant noted that the two concentrate purchase contracts in which Compass Lexecon relied on to forecast tin and zinc concentrate prices (one sole contract for each mineral) were not arm length contracts because they had been signed and/or amended by Colquiri S.A. and Glencore International AG (which, at the time, were related companies).[740] Therefore, Quadrant concluded that Compass Lexecon's projected concentrate prices were unreliable.

484. Compass Lexecon has not submitted with its second report any arm lengths contracts that allow to reasonably forecast concentrate prices. It continues to rely on the same two contracts signed in 2003 and 2007, *i.e.*, far away from the valuation date. As explained by Quadrant:

> *For tin and zinc concentrate prices, Compass Lexecon relies on a single contract: for zinc, a 2003 contract with 13 amendments signed between Colquiri S.A. and Glencore International AG; and for tin, a 2007 contract between the same parties. In the First Flores Report, I noted that neither contract represents an arms-length contract. Claimant has not provided any additional contracts that could be used as a comparison. Compass Lexecon acknowledges that "contracts are short-term outfits in nature, typically lasting one-to-two years," but has not updated its analysis with a more contemporary contract.*[741]

485. Therefore, Quadrant's criticisms remain in place and the Tribunal should disregard the concentrate prices underlying Claimant's valuation.

4.1.3.6 Claimant's updated valuation continues to underestimate capital (CAPEX) and operating expenses (OPEX)

486. *In limine*, Bolivia must make three preliminary comments in relation to costs:

487. *First*, Claimant's CAPEX assumptions confirm that the Triennial Plan was never approved and was not being implemented as of the reversion date, contrary to what Claimant's witnesses pretend. Indeed, Compass Lexecon makes no adjustment in its model for CAPEX already completed and instead uses the full CAPEX values listed in the Triennial Plan,[742] which is inconsistent with the claim that the Triennial Plan was already being implemented by mid-2012.

740 Econ One, ¶¶ 59 et seq; Documents produced by Claimant for Request 19, **R-499**.

741 Quadrant II, footnote 172 (emphasis added).

742 Compass Lexecon Updated Colquiri Valuation, **CLEX-40**, tab "CAPEX."

488. *Second*, Bolivia has demonstrated that, post-reversion, State-owned Colquiri had to make large investments to increase the Mine's production levels. These investments (made during a 6-year period both in the Mine and Plant) amount to US $ 36.7 M,[743] just below the US $ 43.7 M CAPEX expansion investment assumed by Claimant's valuation for the entire duration of the Mine Lease[744] (*i.e.*, 20 years counted from the reversion date).

489. Despite the above, Claimant's valuation assumes that the Mine would have produced almost 175,000 MT more per year (550,579 MT) than the annual average of 375,426 MT attained by Colquiri in 2019[745] as a result of all of the investments made by State-owned Colquiri.[746] This confirms how unreasonable Glencore's cost assumptions are.

490. *Third*, Claimant's experts' have made several corrections to their CAPEX and OPEX assumptions as a result of Bolivia's experts' demonstration. Among others:

- RPA now includes an additional US $ 3.9 M of CAPEX to increase the height and holding capacity of the pre-existing tailings dam, and an additional US $ 2 M of CAPEX for a new tailings dam;[747] and
- Compass Lexecon now includes the impact of tax receivables, which reduces its valuation by US $ 2.2 M compared with its first report, all else equal.[748]

491. Despite these adjustments, Claimant's valuation continues to grossly underestimate CAPEX and OPEX.

492. *First*, Claimant's CAPEX estimate is still unduly low for, at least, two reasons:

493. One, Claimant underestimates the CAPEX needed to increase the supply of energy to sustain its production forecasts (as it assumes that only US $ 2.4 M would be needed to develop a completely independent power line).[749]

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743 Compañía Minera Colquiri Summary of Investment Projects 2013- Nov 2017, **R-38**.

744 Compass Lexecon Updated Colquiri Valuation, **CLEX-40**, tab "CAPEX."

745 Average for the period 2013-2019. Colquiri Operations Report of December 2013, **R-472**, tab "Produccion," row 133; Colquiri Operations Report of December 2014, **R-469**, tab "Produccion," row 138; Colquiri Operations Report of December 2015, **R-473**, tab "Produccion," row 146; Colquiri Executive Operations Report of December 2016, **R-474**, p. 7 of the pdf; Colquiri Executive Operations Report of June 2017, **R-416**, p. 6 of the pdf; Colquiri Executive Operations Report of December 2017, **R-417**, p.8 of the pdf; Colquiri Executive Operations Report of December 2018, **R-451**, p. 14 of the pdf; Colquiri Executive Operations Report of December 2019, **R-452**, p. 11 of the pdf.

746 Compañía Minera Colquiri Summary of Investment Projects 2013- Nov 2017, **R-38**, Colquiri, Public Hearing Accountability for 2018 Presentation, **R-500**, slides 17, 24.

747 RPA II, ¶ 180.

748 Compass Lexecon Updated Colquiri Valuation, **CLEX-40**, tab "Control Panel."

749 RPA II, ¶ 168.

494. Two, Claimant's valuation continues to consider only US $ 3.3 M as reclamation and closure costs for the Mine and Concentrator Plant. This is wrong and lacks any basis. Claimant and its experts have conveniently ignored SRK's explanation as to why a higher cost should be considered for reclamation and closure (contrary to RPA, SRK did visit the Mine site). As explained by SRK since its first report:

> *[i]n my opinion, and having visited the site, this [US $ 3.3 M estimate] is inadequate for a site with such a long operating history (as indicated in Section 5 above, the Colquiri mine was in operation since Colonial times) and such extensive and largely ageing facilities and infrastructure. Two, if not three, tailings dams would have to be closed and rehabilitated, two beneficiation plants would have to be demolished, and all materials and equipment removed and disposed of. At this stage, I do not know whether seepage water treatment emanating from the mine and tailings dam would need to be collected and treated potentially in perpetuity. Then, there is the added complication of the Colquiri town itself, which as discussed earlier, is inextricably linked to the mine and the mine facilities. In light of this, and based on my experience, I estimate the site closure costs to be around US$8 million, and even this may be understated.*[750]

495. Claimant contends that "*given the geological profile of the Colquiri deposit, there likely would have been ample mineral resources to continue operations beyond 2030. As a result, Glencore Bermuda most likely would not have incurred closure costs at the termination of the Colquiri Lease*."[751] This is entirely speculative, just as Glencore's assumption – discussed in Section 4.1.3.1 above – that new resources and reserves will be *magically* delineated over time to justify a 20-year LOM. In any event, any willing buyer would have factored in its valuation the likely closure and remediation costs.

496. *Second*, Claimant's OPEX estimate is unduly low for, at least, two reasons:

497. One, relying solely on the Triennial Plan, Claimant's valuation continues to assume OPEX of only US $ 47.67 per MT starting in 2014 and increasing by only 2% inflation each year.

498. On the one hand, this estimate is inconsistent with "*the clear trend of increasing unit operating costs under Claimant's management of the mine [2005-2011]*,"[752] identified by Quadrant and shown in the graph below:[753]

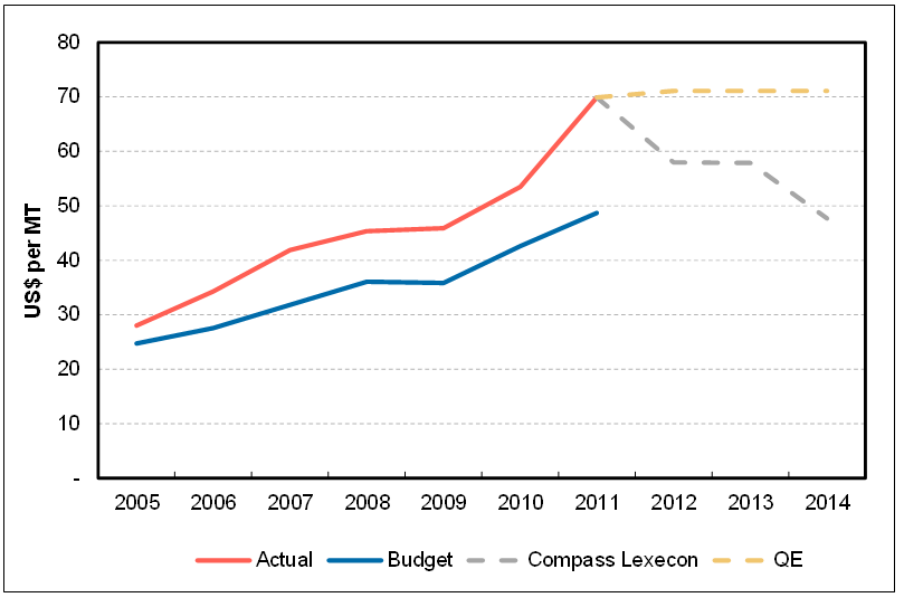
750 SRK I, ¶ 72.

751 Reply on Quantum, ¶ 111.

752 Quadrant II, ¶ 68.

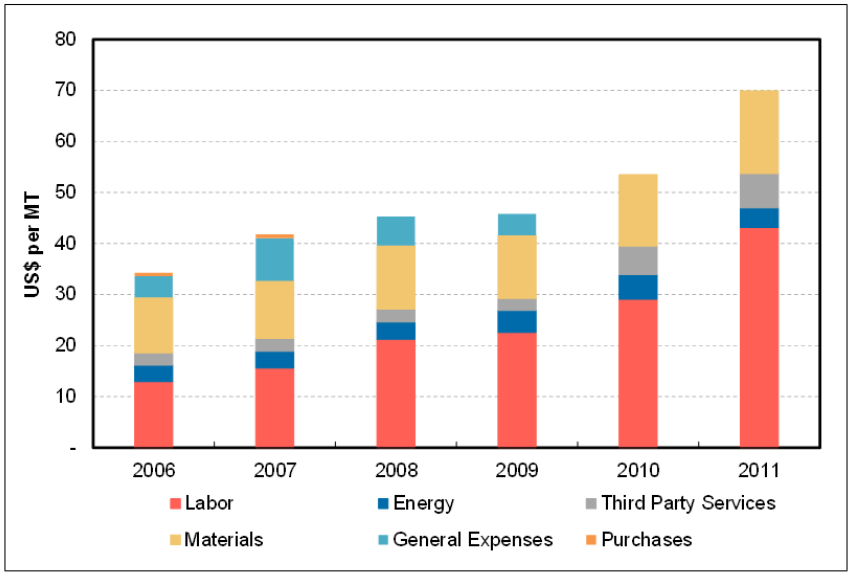
753 Quadrant II, Figure 6.

Figure 6
Actual vs. Budgeted Operating Costs[134]



499. Colquiri's OPEX doubled in a 6-year period, from US $ 34.27 per MT in 2006 to US $ 69.88 per MT in 2011:[754]

Figure 7
Colquiri Unit Operating Costs[137]



500. It defies credibility to expect that, by 2014, OPEX would have been reduced by 32% (to US $ 47.67).

501. On the other hand, Glencore's internal documents show it expected OPEX to increase as mining goes deeper. [redacted]

754 Quadrant II, Figure 7.

[redacted][755] There is no explanation for why this trend would not have continued after the reversion of the Mine Lease.

502. Two, Claimant's valuation continues to assume that Colquiri would benefit from economies of scale as it ramped-up production, despite the clear evidence that Colquiri never achieved economies of scale in the past.[756] For instance:

- From 2006 to 2007, Colquiri increased its processing rate from 277,683 MT to 310,714 MT.[757] However, as shown in the graph above, Colquiri's unit costs per MT did not decrease but rather increased;
- From 2009 to 2010, Colquiri increased its processing rate from 241,997 MT to 273,617 MT.[758] However, as shown in the graph above, Colquiri's unit costs per MT did not decrease but rather increased; and
- From 2010 to 2011, Colquiri increased its processing rate from 273,617 MT to 280,383 MT.[759] However, as shown in the graph above, Colquiri's unit costs per MT did not decrease but rather increased.

503. Therefore, there is no support to assume, as Claimant does, that Colquiri would achieve economies of scale as it ramps-up production. The available evidence suggests the opposite would happen.

504. As explained by Quadrant, "*Compass Lexecon's assumed economies of scale results in paltry increases in overall operating expenses compared with its projected increases in revenue*,"[760] as shown in the graph below:

755 [redacted].

756 Quadrant II, ¶ 69.

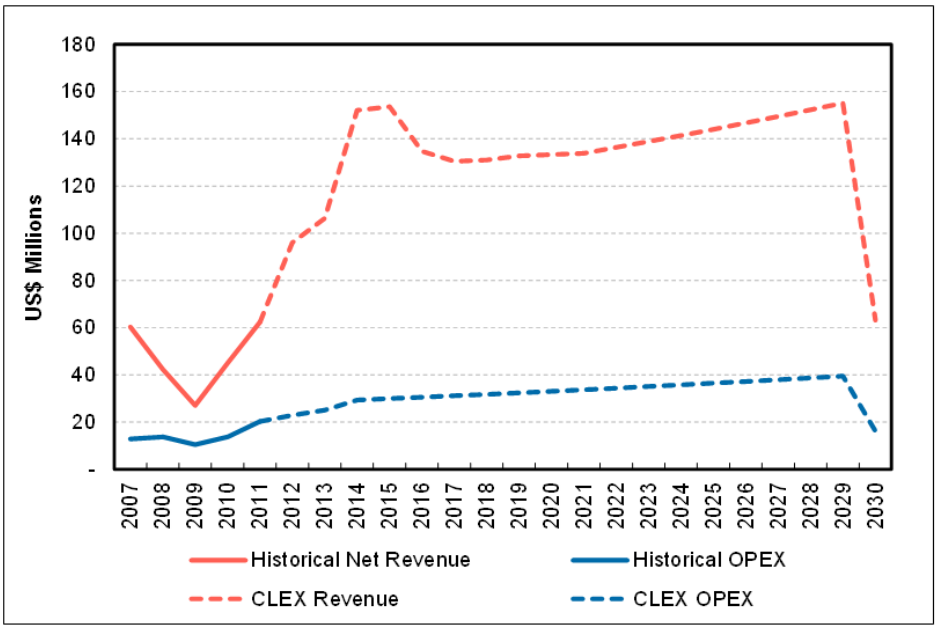
757 DCF and Calculations (Colquiri), **EO-02**, Table 3, Colquiri – Historical Production.

758 DCF and Calculations (Colquiri), **EO-02**, Table 3, Colquiri – Historical Production.

759 DCF and Calculations (Colquiri), **EO-02**, Table 3, Colquiri – Historical Production.

760 Quadrant II, ¶ 76, Figure 9.

Figure 9
Colquiri Revenue and OPEX according to Compass Lexecon[149]



505. For the foregoing reasons, the Tribunal should dismiss Claimant's unduly low CAPEX and OPEX estimates. Instead, the Tribunal should rely on Bolivia's experts' estimates, which are more reasonable and realistic and consistent with historic data.

* * *

506. As demonstrated in this Section 4.1.3, Glencore's forecasts are unreasonable and result in an inflated valuation of the Mine Lease. The Tribunal shall disregard such valuation and rely instead in Quadrant's valuation, which, relying on SRK, assumes reasonable parameters for all relevant variables. Indeed, among others, Quadrant's valuation assumes:

- Resource base: 4.28 million MT of mineable material;[761]
- Production rate: 307,000 MT per year;[762]
- Head grades: 1.17% for tin and 6.70% for zinc;[763]
- Recovery rates: 65.54% for tin and 69.61% for zinc;[764]

761 Quadrant II, ¶ 7.

762 Quadrant II, ¶ 7.

763 Quadrant II, Figure 5.

764 Quadrant II, Figure 5.

- Concentrates Grades: 49.00% for tin and 45.00% for zinc;[765] and

- OPEX: US $ 71.09 per MT.

507. Pursuant to Quadrant's analysis, the value of the Mine Lease was at most US $ 40.7 million as of 19 June 2012.[766]

4.1.4 The Old Tailings Reprocessing Project Was Not A Going Concern Or, In Any Event, Economically Viable As Of Claimant's Or Bolivia's Valuation Date, And It Is Still Not So Today

508. In order to further inflate its claims, Claimant maintains that it would "coincidentally" have begun investing in an Old Tailings Reprocessing Project that had been abandoned for years, right after the Reversion. For this, Claimant seeks to rely on a Feasibility Study prepared by Comsur in December 2003 (i.e., before Claimant's acquisition and 9 ½ years before the Mine Lease was reverted).[767] Of course, there is no coincidence here; only an attempt to put before the Tribunal a fanciful claim in the hopes that the Tribunal will think to be doing justice by rejecting such claim in finding a "middle ground." But that would be a grave injustice.

509. Based on RPA's input, Compass Lexecon applies the DCF method to estimate the NPV of the Old Tailings Reprocessing Project at US$ 99 million (*i.e.*, 26% of the damages claimed by Claimant in relation to Colquiri).[768] As Bolivia explained in its Answer Memorial, the DCF method is inappropriate to estimate the FMV of non-operating projects like the Old Tailings Reprocessing Project.

510. *In limine*, Claimant argues that "*a non-operating asset may be valued pursuant to the DCF method when, as is the case for the Tailings Plant, there is sufficient information regarding the asset to forecast lost profits*."[769] This is wrong for, at least, five reasons:

765 Quadrant II, Figure 5.

766 Quadrant II, Figure 10, ¶ 88.

767 Feasibility Study of the Colquiri Tailings Project, **C-61**.

768 Compass Lexecon II, Table 1.

769 Reply on Quantum, ¶ 53.

511. *First*, the Old Tailings Reprocessing Project is not an asset, but an old unapproved project that exists only on paper. At the time of the reversion, Claimant had not laid a single brick of what it misleadingly refers to as the "*Tailings Plant.*"[770] The only images of the Project that Claimant has located show nothing but an empty plot of land where it claims to have performed earth works:[771]

512. Tellingly, neither the Triennial Plan nor the March 2012 Investment Plan (which were both prepared only 9 and 2 months prior to Colquiri's reversion, respectively) even mention the Old Tailings Reprocessing Project.[772]

513. *Second*, contrary to Claimant's contentions, international investment tribunals agree that the DCF method cannot be applied to non-operating projects, or assets that lack a profitability track record, because it would result in too uncertain and speculative valuations.[773]

514. In the recent *South American Silver* award, for example, the tribunal concluded that the DCF method was inappropriate to estimate the FMV of a mining project that had not reached the

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770 Unlike Claimant, RPA adopts the correct terminology and refers to the Old Tailings Reprocessing Project as the "*Tailings **Project***."

771 "Colquiri Tailings Project," Sinchi Wayra presentation, **C-315**, p. 8.

772 2012-2014 Colquiri Mine Three-year Plan, **C-108**; March 2012 Investment Plan, April 4, 2012, **EO-07**.

773 *Metalclad Corporation v United Mexican States* (ICSID Case No ARB(AF)/97/1) Award of 30 August 2000, **CLA-27**, ¶¶ 120-121; *Southern Pacific Properties (Middle East) Limited v Arab Republic of Egypt* (ICSID Case No ARB/84/3) Award on the Merits of 20 May 1992, **CLA-18**, ¶¶ 188-189; *Wena Hotels Ltd. v. Arab Republic of Egypt*, ICSID Case No. ARB/98/4, Award of 8 December 2000, **RLA-68**, ¶¶ 123-124; *Rumeli Telekom A.S. and Telsim Mobil Telekomikasyon Hizmetleri A.S. v. Republic of Kazakhstan*, ICSID Case No. ARB/05/16, Award, **RLA-112**, ¶¶ 810-811; *South American Silver Limited v Plurinational State of Bolivia* (PCA Case No. 2013-15), Award of 22 November 2018, **CLA-252**, ¶¶ 865-866; S. Ripinsky con K. Williams, Damages in International Investment Law, British Institute of International and Comparative Law (2008), **QE-7**, pp. 205-206.

production stage. As a result, the tribunal awarded claimant the amounts that it had invested in the project:

> ***If it is not possible to estimate the value of the Project by applying the discounted cash flow method since it is not a project in the production stage****, as the experts for both Parties accept; if it is not possible to value the Project on the basis of comparable projects, which do not appear to exist in this case; if, as the Tribunal has noted, there is no evidence of the economic viability of the Project with which to estimate its value with some degree of certainty [...]* ***then the market value of such shares would have to be determined by reference to CMMK's value, which*** *for the purposes of compensation and on the basis of the evidence in the record,* ***corresponds to the value of what CMMK invested in the Project****.*[774]

515. Surprisingly, although RPA participated in *South American Silver* as Claimant's expert, where it agreed that the DCF method was inappropriate to estimate the value of a non-operating project equivalent to the Old Tailings Reprocessing Project,[775] and the tribunal categorically rejected the appropriateness of applying the DCF method to value such project, in the present case RPA insists on applying it.[776]

516. Similarly, the tribunal in *Southern Pacific Properties* determined that the DCF method was inappropriate "*because the project was not in existence for a sufficient period of time to generate the data necessary for a meaningful DCF calculation. At the time the project was cancelled, [it] was in its infancy and there is very little history on which to base projected revenues*." The *Southern Pacific Properties* tribunal concluded, citing *Chorzow Factory*, that "*the application of the DCF method would […] result in awarding 'possible but contingent and undeterminate damage which, in accordance with the jurisprudence of arbitral tribunals, cannot be taken into account.* "'[777]

517. The *Metalclad* tribunal also found that "*where the enterprise has not operated for a sufficiently long time to establish a performance record or where it has failed to make a profit, future profits cannot be used to determine going concern or fair market value*." The *Metalclad* tribunal concluded that a DCF analysis was inappropriate "*because the [enterprise] was never*

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774 *South American Silver Limited v Plurinational State of Bolivia* (PCA Case No. 2013-15), Award of 22 November 2018, **CLA-252**, ¶ 865 (emphasis added).

775 *South American Silver Limited v Plurinational State of Bolivia* (PCA Case No. 2013-15), Award of 22 November 2018, **CLA-252**, ¶ 742 ("*Similarly,* ***based on the reports submitted by FTI and RPA, the Claimant argues that*** *compensation based on fair market value is the only one available in the present case, since* ***given the stage of Project development, discounted cash flow valuation would not be reliable***") (emphasis added); *South American Silver Limited v Plurinational State of Bolivia* (PCA Case No. 2013-15), Award of 22 November 2018, **CLA-252**, ¶ 806 ("*According to CIMVal, "mineral resource properties" can be valued using a market approach and, in some cases, an income or cost-based approach.* ***The experts for both Parties agree that an income approach – in particular, the discounted cash flow approach – is not appropriate***") (emphasis added)

776 RPA II, ¶ 8.

777 *Southern Pacific Properties (Middle East) Limited v Arab Republic of Egypt* (ICSID Case No ARB/84/3) Award on the Merits of 20 May 1992, **CLA-18**, ¶¶ 188-189.

operative and any award based on future profits would be wholly speculative", and awarded the claimant the costs invested in the project.[778]

518. *Third*, based on *Crystallex* and *Gold Reserve*, Claimant argues that tribunals have applied the DCF method to non-operating assets.[779] However, the facts of these cases are substantially different to the facts of the present case and, consequently, the awards cited by Claimant are not relevant to the issues before the Tribunal. Specifically:

519. One, unlike the present case, in both *Crystallex* and *Gold Reserve*, the State (Venezuela) had approved the feasibility studies conducted by the claimants.[780] For that reason, the economic viability of the project and the principal data on which the DCF method was to be based were undisputed. Furthermore, in *Gold Reserve*, the parties' experts agreed that the DCF method was appropriate to value the asset.[781]

520. Two, the assets being valued in both *Crystallex* and *Gold Reserve* were gold mines. Both tribunals highlighted the stability of the gold price and the importance of its reliability for projecting cash-flows.[782] As Claimant noted repeatedly, tin and zinc prices are subject to important fluctuations and, as such, tin and zinc projects cannot be reasonably compared to gold projects.[783]

521. Three, the Crystallex tribunal also referred to the fact that "*predicting future income from ascertained reserves to be extracted by the use of traditional mining techniques—as is the case of Las Cristinas—can be done with a significant degree of certainty, even without a record of past production*."[784] This is not the case of tailings reprocessing. As SRK notes, to date, the amount and head grade of the minerals in the old tailings dam is uncertain as its sampling and analysis was performed over 20 years before the reversion of the Mine Lease,

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778 *Metalclad Corporation v United Mexican States* (ICSID Case No ARB(AF)/97/1) Award of 30 August 2000, **CLA-27**, ¶¶ 120-121.

779 Reply on Quantum, ¶¶ 52-56.

780 *Crystallex International Corporation v Bolivarian Republic of Venezuela* (ICSID Case No ARB(AF)/11/2) Award of 4 April 2016, **CLA-130**, ¶ 32; *Gold Reserve Inc v Bolivarian Republic of Venezuela* (ICSID Case No ARB(AF)/09/1) Award of 22 September 2014, **CLA-123**, ¶¶ 14, 18.

781 *Gold Reserve Inc v Bolivarian Republic of Venezuela* (ICSID Case No ARB(AF)/09/1) Award of 22 September 2014, **CLA-123**, ¶ 830.

782 *Crystallex International Corporation v Bolivarian Republic of Venezuela* (ICSID Case No ARB(AF)/11/2) Award of 4 April 2016, **CLA-130**, ¶ 879 ("*Furthermore, gold, unlike most consumer products or even other commodities, is less subject to ordinary supply-demand dynamics or market fluctuations, and, especially in the case of open pit gold mining as in Las Cristinas, is an asset whose costs and future profits can be estimated with greater certainty*"). *Gold Reserve Inc v Bolivarian Republic of Venezuela* (ICSID Case No ARB(AF)/09/1) Award of 22 September 2014, **CLA-123**, ¶¶ 830-831.

783 Reply on the Merits, ¶¶ 19, 92; Reply on Quantum, ¶ 72.

784 *Crystallex International Corporation v Bolivarian Republic of Venezuela* (ICSID Case No ARB(AF)/11/2) Award of 4 April 2016, **CLA-130**, ¶ 879.

and with unreliable techniques. For that reason, SRK notes that *"[i]f [I] were to evaluate this project today, I would recommend a new drilling and sampling campaign using latest technology drilling and additional metallurgical testwork.*"[785]

522. *Fourth*, international tribunals have preferred the costs method over DCFs when there is considerable disproportion between the investment made and the amount of damages resulting from the DCF method. For example, in *Tecmed* the tribunal noted that "*the considerable difference in the amount paid under the tender offer for the assets related to the Landfill – US$ 4,028,788– and the relief sought by the Claimant, amounting to US$ 52,000,000*" before rejecting application of the DCF method and applying the costs method instead.[786]

523. A greater disproportion than the one verified in *Tecmed* (1 to 12 ratio) exists in this case. Indeed, while Claimant alleges that it invested USD 1.2 million in the Old Tailings Reprocessing Project, the claimed compensation for the Old Tailings Reprocessing Project (excluding interests) amounts to USD 99 million (a 1 to 82 ratio). This shows the purely speculative and abusive nature of the compensation claimed by Glencore.

524. *Fifth*, Claimant cites the VALMIN Code in support of using the DCF method to value the Old Tailings Reprocessing Project[787]. Claimant alleges that the VALMIN Code "*recommends applying income-based valuation approaches – such as the DCF method – to 'development' projects like the Tailings Plant 'for which a decision has been made to proceed with construction or production […] but which [is] not yet commissioned or operating at design levels*.'"[788] This is false.

525. As SRK explains,[789] the Old Tailings Reprocessing Project does not qualify as a "*development*" project under the VALMIN Code, which defines "*development*" projects as "*[t]enure holdings for which <u>a decision has been made to proceed with construction or production</u> or both, but which are not yet commissioned or operating at design levels. Economic viability of Development Projects will be proven by at least a Pre-Feasibility*

785 SRK II, ¶ 90.

786 *Técnicas Medioambientales Tecmed SA v United Mexican States* (ICSID Case No ARB(AF)/00/2) Award of 29 May 2003, **CLA-43**, ¶ 186. See, also, *Wena Hotels Ltd. v. Arab Republic of Egypt*, ICSID Case No. ARB/98/4, Award of 8 December 2000, **RLA-68**, ¶ 124 ("*[…] the Tribunal is disinclined to grant Wena's request for lost profits and lost opportunities given the large disparity between the requested amount (GB£ 45.7 million) and Wena's stated investment in the two hotels (US$8,819,466.93)*").

787 Reply on Quantum, ¶ 55.

788 Reply on Quantum, ¶ 55.

789 SRK II, ¶¶ 72-73.

Study."[790] As stated before, it is undisputed that the Old Tailings Reprocessing Project has never entered the production stage. Additionally, the fact that Claimant has not produced any document containing the Project's approval in response to Bolivia's document requests[791], or that it did not implement it during the seven years it owned Colquiri, confirms that Claimant had no real intention of carrying out the Project. Lastly, the fact that to this date no owner of Colquiri (Bolivia, Comsur and Claimant) ever implemented the Project further confirms that it is not economically viable. It defies credibility to expect all of these operators to simply have ignored an opportunity that had, according to Claimant's valuation, a NPV of USD 99 million. A willing buyer would have been suspicious of this.

526. To conclude, investment tribunals agree that the DCF method is inappropriate to value non-operating projects, or assets that do not have a profitability track record. It is undisputed that at the time of the reversion, the Old Tailings Reprocessing Project was a non-operating project without any profit history, no implementation and no study of reserves or resources. Therefore, the DCF method is inappropriate to estimate the value of the Old Tailings Reprocessing Project and Claimant's experts' valuation should be dismissed entirely.

527. Without prejudice to the foregoing, there are, at least, twelve reasons why the Old Tailings Reprocessing Project would not have been considered by a willing buyer and, in any case, why this Project would not have resulted in any positive NPV to Claimant:

528. *First*, Claimant relies exclusively on the preliminary sampling conducted by Comibol in 1978, 1982 and 1990 (that is, 22 to 34 years prior the reversion of the Mine Lease) to show that the Project was valuable.[792] However, as SRK explains, Comibol had sampled only the centre of the old tailings dam, but not the periphery.[793] A study of the Old Tailings Reprocessing Project conducted by the mining consulting firm Pincock Allen & Holt (the "***Pincock Report***") reached the same conclusion.[794]

529. Had Claimant seriously considered the Project, it would have completed the preliminary sampling conducted by Comibol between 1978 and 1990 to determine with a reasonable degree of certainty the quantity of available mineral and its head grade. It did not.

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790 The VALMIN Code - Australasian Code For Public Reporting of Technical Assessments and Valuations of Mineral Assets, **R-260**, Section 4, p. 39 (emphasis added).

791 Annex 2 to Procedural Order No. 9 of 30 September 2019, Requests No. 24-25.

792 Pincock, Allen & Holt, 2004, Colquiri Tailings Project, Final Report, November 5, 2004, **RPA-12**, p 10.1.

793 SRK I, ¶ 88 ("*The central part of the tailings dam is reasonably well drilled with drillholes spaced approximately 25 m apart. The periphery of the tailings dam is less well sampled with drillholes spaced approximately 70 m apart*).

794 Pincock, Allen & Holt, 2004, Colquiri Tailings Project, Final Report, November 5, 2004, **RPA-12**, Section 10.1.

530. *Second*, Claimant alleges that in 2006 and 2007, it invested approximately US$1.2 million "*building the platform on which the Tailings Plant was to be constructed and purchasing related materials*"[795] and that it "*intended to continue the construction of the Tailings Plant […] when the [2008] global financial crisis forced it to pause*" as it caused "*a dramatic fall in mineral prices, including tin and zinc*."[796] This is misleading at best.

531. One, even assuming *arguendo* that Claimant's description of the facts were accurate, Claimant acknowledges that during the three years between its acquisition of Colquiri in 2005 and the 2008 global crisis, it only "*buil[t] the platform on which the Tailings Plant was to be constructed and purchas[ed] related material*."[797] Additionally, as shown above, there is no compelling evidence that the platform was actually ever built.

532. Then, Claimant explains that, after prices "*stabilized*", between 2011 and May 2012 it only "*conducted a new study to confirm the stability of the platform (that it had constructed in 2007) […] and reached an agreement with the Cooperativa 21 de Diciembre […] to abandon the tailings so that Colquiri could mine them*."[798] In other words, during the 1 ½ year between the alleged "*stabilization*" of commodities' prices and the reversion of the Mine Lease, Claimant only conducted a stability study (that is nowhere to be found in the record) and reached an agreement with the *cooperativistas* (that, as explained below, was unrelated to the Project).

533. Two, even after the 2008 crisis, tin and zinc prices were always considerably above Claimants' initial price forecasts for to the Old Tailings Reprocessing Project.[799] Therefore, tin and zinc prices were always beneficial in comparison to Claimant's original estimates and cannot explain why Claimant failed to implement the Project during the seven years it operated the Mine.

534. *Third*, to this date, more than 40 years after the first drilling sample was obtained from the old tailings dam, no owner of Colquiri[800] (including Claimant) has ever taken substantial steps to implement the Project. This confirms that the Project is not economically viable. As SRK

795 Reply on Quantum, ¶ 70.

796 Reply on Quantum, ¶ 72.

797 Reply on Quantum, ¶ 70.

798 Reply on Quantum, ¶ 75.a.

799 DCF model prepared by Glencore Bermuda for the acquisition of the Assets, **C-311 (redacted)** ("Colquiri Tailings" tab, lines 9-11). See also SRK I, Figures 4 and 5.

800 There is no evidence that Comsur had begun work on the Tailings Plant Project. Glencore only relies on Eskdale III, ¶ 24.

explains, "*[t]he fact that this project, which was first evaluated in 1978, has still not been implemented some 40 years later, suggests that something is remiss*."[801]

535. Contrary to Glencore's contention,[802] the new concentrator plant (the "**New Concentrator Plant**") that Colquiri has recently approved for construction does not assist Claimant's case because it will replace the existing Plant to process ore obtained from the Mine. It is not intended, nor will it have, capacity to reprocess old tailings.[803] The "*Formulario de Nivel de Categorización Ambiental*" for the New Concentrator Plant shows that the "*planta [actual] paralizar[á] su funcionamiento una vez que la nueva entre en operación.*"[804] This document confirms that the news articles cited by Claimant in support of its contention are inaccurate[805].

536. The fact that Bolivia will invest USD 75 M[806] in the New Concentrator Plant to increase Colquiri's production instead of investing the Old Tailings Reprocessing Project further confirms that the Old Tailings Reprocessing Project is not economically viable.

537. [redacted][807] Mr Lazcano's statement is wrong.

538. [redacted].

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801 SRK I, ¶ 38.

802 Reply on Quantum, ¶ 89.

803 Comprehensive Technical Economic Social and Environmental Study (TESA) for the Design of the New Mineral Concentration Plant with capacity 2000 tdp, Executive Summary, June 2015, **R-35**; Empresa Minera Colquiri, Direct Contracting of Goods and Services, International Public Invitation EMC-PCPL-001/2007 (First Call) for the "New Construction of the 2000 TPD Colquiri Concentrator Plant", December 2017, **R-36**.

804 Colquiri, Environmental Categorization Level Form for the New Concentrator Plant of 12 June 2018, **R-501**, p. 3 (Unofficial translation: "*the current [plant will] paralyze its functioning when the new one starts operating*").

805 "Firman contrato para la construcción de la Planta Concentradora de Colquiri," *Éxito Noticias*, **C-334**; "Comibol push through issues to ramp up production," *International Tin Association* of 20 May 2019, **C-335**. These articles do not contain the language that Claimant cited.

806 Comprehensive Technical Economic Social and Environmental Study (TESA) for the Design of the New Mineral Concentration Plant with capacity 2000 tdp, Executive Summary, June 2015, **R-35**; Empresa Minera Colquiri, Direct Contracting of Goods and Services, International Public Invitation EMC-PCPL-001/2007 (First Call) for the "New Construction of the 2000 TPD Colquiri Concentrator Plant", December 2017, **R-36**.

807 Lazcano III, ¶ 66.

808 [redacted].

539. Additionally, given that the Old Tailings Reprocessing Project would have increased the demand of the already scarce water and energy supply (without which the Mine and the Concentrator Plant cannot operate), [redacted]

540. *Fifth*, Bolivia's Statement of Defence showed that RPA's estimated head grades average for the old tailings are unduly high (4.21% for zinc and 0.51% for tin),[809] and that RPA's assumption that head grades would remain constant throughout the life of the Project is mistaken.

541. In its second report, RPA simply contends that "*SRK's comment that the grades are too elevated is unfounded as demonstrated by the several independent Ore Reserve estimates carried out on the Tailings Project*."[810] However, as SRK explains, such "*independent ore reserves*" are based on studies of the old tailings that were conducted 22 to 34 years prior to the Reversion and applied questionable drilling and sampling techniques. For that reason, their result are unreliable.[811]

542. *Sixth*, in its first report SRK demonstrated that RPA's forecasted metallurgical recovery rates are unduly high (65% for zinc and 51% for tin),[812] and that RPA's assumption that metallurgical recovery rates would remain constant throughout the life of the project is likewise mistaken. In its second report, RPA simply maintains its forecasted metallurgical recovery rates and fails to address SRK's comments.[813]

543. *Seventh*, following Bolivia's comments that the US$ 5 million originally estimated by Glencore's experts (based on the Triennial Plan) to increase Colquiri's tailings dams' capacity were insufficient,[814] Glencore's experts have now adjusted their estimates to include additional capital expenditures of US$ 5.9 million.[815] However, as Bolivia's experts explain, the additional US$ 5.9 million are still insufficient.

544. RPA estimates that building an additional tailings dam with 2.0 million tonnes of storage capacity would cost approximately US$2.0 million "*based on prorating the construction costs*

809 Reply on Quantum, ¶ 63; Statement of Defence, Section 7.3.4.2.c.

810 RPA II, ¶ 148.

811 SRK II, Section 4.3.

812 Reply on Quantum, ¶ 63.

813 RPA II, ¶ 154.

814 SRK Report I, ¶¶ 19, 55, 85.

815 Compass Lexecon II, ¶ 43.a.

used in the Triennial Plan."[816] However, the Triennial Plan's construction costs relate to the expansion of an existing tailings dam (*i.e.* basically raising the height of the dam's wall) and, as such, are inappropriate to estimate the construction of an entirely new tailings dam. As a result, RPA's reliance on the expected expansion cost of the tailings dam in the Triennial Plan is inappropriate and inevitably results in underestimating of the actual cost to build a new tailings dam.

545. Additionally, as we explained in our Statement of Defence, the Huanuni mine recently constructed a new tailings dam with 2.7 million tonnes of storage capacity at a cost of US$ 9.5 million (plus the cost of purchasing the land).[817] SRK explains that Huanuni's new tailings dam constitutes a suitable proxy to estimate the construction costs of a new tailings dam at Colquiri. Based on prorating the construction costs of the Huanuni tailings dam, the construction of a 2.0 million tonnes tailings dam would cost at least US$ 7 million (that is, US$ 5 million more than estimated by RPA).[818]

546. *Eight*, RPA considers an investment of US $ 30.5 million for the construction of a new tailings reprocessing plant on the basis of a cost estimate prepared by Claimant in April 2005 (US$ 19 million), updated to 2012 value.[819] RPA's estimate undervalues the necessary investment to build a tailings reprocessing plant for, at least, two reasons:

547. One, in September 2005 Claimant revised its cost estimate and increased it to US$ 31.2 million, as the following presentation prepared by Claimant (that Bolivia obtained on disclosure) demonstrates:[820]

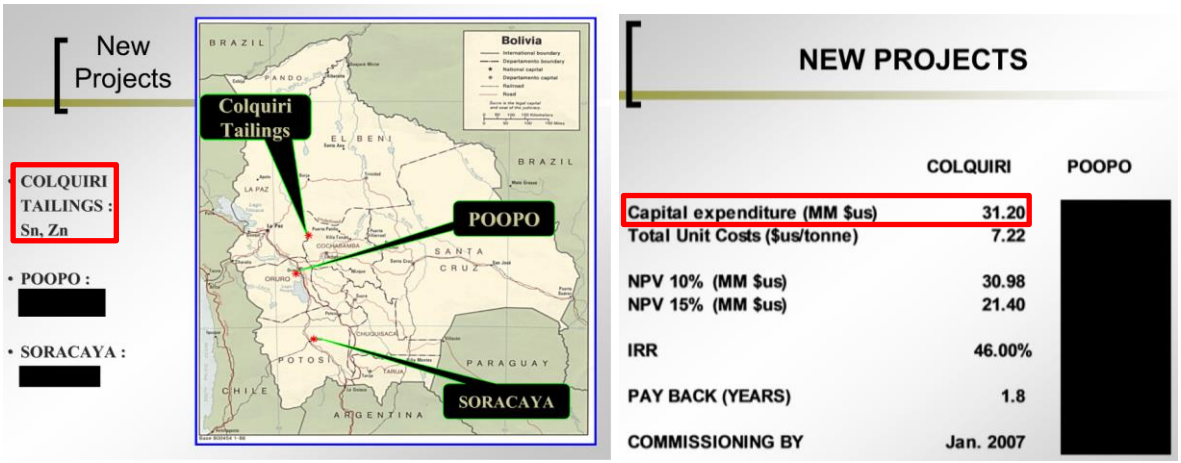
816 RPA II, ¶ 179.

817 Statement of Defence, ¶ 832; Wila Khollu Tailings Dam Project, Empresa Minera Huanuni, **R-40**, pp. 1, 3.

818 SRK II, ¶ 86; Documents produced by Claimant for Request 8, **R-502**; Documents produced by Claimant for Request 9, **R-503**.

819 RPA II, ¶ 184; Compañia Minera Colquiri S.A., 2005, Proyecto Colas Colquiri Capital CostEstimate, April 2005, **RPA-15**, p. 10.6.

820 Glencore International, Presentation on Comsur, September 2005, **R-504**, pp. 11-12.



548. Following RPA's methodology, Quadrant updated the US$ 31.2 million estimate to 2012 value, which amounts to US$ 47.4 million (*i.e.*, 50% more than RPA's estimate).[821]

549. Two, the Pincock Report that Claimant relies upon to show the validity of its experts' projections states that *"[t]he capital cost estimate ($19 million) appears low*."[822] This is confirmed by the disparity between the New Concentrator Plant's construction cost (US$ 75 million for 2,000 tpd capacity or US$ 37,500/tpd) and RPA's estimate for the old tailings reprocessing plant (US $ 30.5 million for 3,000 tpd capacity or US$ 10,167/tpd).[823]

550. *Ninth*, RPA underestimates the Old Tailings Reprocessing Project's operating costs.[824] As Prof Rigby explained in his first expert report, there is only a small difference between the regular ore treatment process and the old tailings reprocessing (*"[g]iven the fact that the old tailings have already been processed once, the proposed new process flowsheet (for the old tailing) essentially only eliminated the frontend crushing stage from the existing flowsheet (used in the regular operations of the Colquiri plant)*)."[825] Consequently, operating costs for the old tailings reprocessing (estimated at US$ 13.16 / ton by RPA) would be substantially higher than RPA presents and, in any case, closer to the regular ore treatment costs (US$ 20.20).[826]

551. *Tenth*, Claimant's experts mistakenly assume that there would be sufficient water and energy in the Colquiri area to sustain the fivefold production expansion considered by the Triennial

821 Quadrant II, ¶ 56; Glencore International, Presentation on Comsur, September 2005, **R-504**, pp. 11-12.

822 Pincock, Allen & Holt, 2004, Colquiri Tailings Project, Final Report, November 5, 2004, **RPA-12**, Section 10.2.2, p. 6.

823 SRK II, ¶ 83.

824 RPA II, ¶ 135.

825 SRK I, ¶ 88.

826 RPA I, ¶ 23.

Plan, and that operating costs would not be affected.[827] [redacted][829]

552. *Eleventh*, our Statement of Defence explained that in 2012 the *cooperativistas* were exploiting the old tailings and that, given the social implications, the implementation of the Old Tailings Reprocessing Project would have been a challenging and time-consuming endeavour, at best.[830]

553. In response, Glencore acknowledges that *Cooperativa 21 de Diciembre* was exploiting the old tailings pursuant to a lease agreement entered into with Colquiri in 2005, but claims that the *cooperativistas* would not be a problem as (i) they were only exploiting a small part of the tailings dam and (ii) it had reached an agreement with them in 2012 "*to abandon the tailings so that Colquiri could mine them*."[831] Glencore's response is misleading and ignores the pervasive conflicts it had with the *cooperativistas*. Specifically:

554. One, although the *cooperativistas* guaranteed in the 2005 sublease agreement that they would not interfere with the Old Tailings Reprocessing Project, by 2012 it was clear that the *cooperativistas* would not honor that, or any, agreement with Claimant (See Section 3.2.1).

555. Two, the agreement that Glencore cites to support its contention that the *cooperativistas* had agreed to "*to abandon the tailings so that Colquiri could mine them*" (the "**April 2012 Agreement**") was executed during the cusp of social turmoil at the Mine and shows Colquiri agreeing to a list of the demands made by the *cooperativistas* in exchange of keeping the social peace:

> *[d]espués de una amplia discusión y exposición de motivos sobre **la situación de asedio que sufrió Colquiri y la empresa Sinchi Wayra durante estas últimas semanas** y que lleg[ó] hasta el ampliado Cantonal, en el que la cooperativa 26 así como **personas interesadas en desequilibrar la estabilidad institucional y la paz***

827 Reply on Quantum, ¶ 99. Glencore says that reprocessing tailing is almost free of cost "*because the tailings are easily accessible in a tailings storage facility and have previously been ground and processed*". According to Eskdale, reprocessing old tailings almost has no costs (the ore has already been mined) and is technically simple (tailings have already been processed and do not have the complications of processing fresh ore). Eskdale III, ¶ 15.

828 [redacted].

829 See Section 4.1.3.c.

830 Statement of Defence, ¶ 837.

831 Reply on Quantum, ¶75.a.

> ***social proponían diversas alternativas para la intervención de la empresa*** *[…] se arrib[ó] a los siguientes acuerdos: [l]a compañía minera Sinchi Wayra S.A. se compromete a:[…] 3. Respecto a pago anticipo por el Proyecto Dique, se acuerda el pago trimestral de 2.000 $us [s]egún el siguiente calendario […]. 4. Se establece la habilitación de 38 puestos de trabajo según programación y disposición de la Empresa.* [832]

556. Eng. Lazcano's allegations that this document contains the terms of compensation for the *cooperativistas* for Claimant's exploitation of the tailings is implausible.[833] Given the social circumstances, Claimant was in no position to commence the Old Tailings Reprocessing Project. Additionally, if as Claimant states, the *cooperativistas* were supposedly bound by the sub-lease agreement to guarantee Claimant's exploitation of the tailings, then there was no reason for Claimant to pay the *cooperativistas* to abandon the tailings. Additionally, the April 2012 Agreement does not contain a single mention to tailings, or any commitment from the *cooperativistas* to abandon the tailings.

557. *Lastly*, in its first report RPA had estimated reclamation and closure costs for the Mine and the Old Tailings Reprocessing Project at US$ 3.3 million and US$ 1 million, respectively. As explained by Prof. Rigby in its first report, RPA's estimate is unduly low, and the total reclamation and closure costs of Colquiri (*i.e.*, for the Mine and the Old Tailings Reprocessing Project) should be around US$ 8 million.[834]

558. In conclusion, for all the above reasons, the Tribunal should entirely dismiss Claimant's valuation of the Old Tailings Reprocessing Project. Claimant has not demonstrated having suffered damages that are certain (there is no evidence that Glencore was implementing the Project as of the reversion date or that it would have generated profits) and thus warrant compensation under international law.

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832 Email from Sinchi Wayra (Mr Hartmann) to Sinchi Wayra (Mr Lazcano), **C-328**, p. 3. See also *id*. ("*En esta ocasión* ***se ratific[ó] la necesidad de aunar esfuerzos institucionales para conservar el ambiente de paz y convivencia pacífica en Colquiri****, así como el de mantener el estado de alerta ante cualquier emergencia* ***que ponga en riesgo la estabilidad institucional*** *y la tranquilidad social en Colquiri"*) (emphasis added) (Unofficial translation: "*On this occasion was ratif[ied] the necessity to add institutional efforts to preserve a peaceful environment and peaceful coexistence in Colquiri, as well as to maintain the alert state for any emergency that might put institutional stability at risk or the social tranquility in Coliquiri*").

833 Lazcano III, ¶ 68 ("*[R]ecuerdo que en abril de 2012 acordamos con la Cooperativa 21 de Diciembre los términos bajo los cuales los compensaríamos cuando comenzáramos a explotar las colas antiguas y se fueran del Dique Antiguo. Concretamente, acordamos que Colquiri les haría un pago trimestral de US$2.000 comenzando en abril de 2012 y contrataría hasta 38 de sus cooperativistas según las necesidades del proyecto*") (Unofficial translation: "*I remember that, in April 2012, we agreed with Cooperativa 21 de Diciembre upon the terms under which we would compensate them once we started exploiting the old tailings and they left the Old Dam. Specifically, we agreed that Colquiri would make a quarterly payment of US$2,000 from April 2012, and would hire up to 38 of its cooperativistas, depending on the project's needs*").

834 SRK II, ¶ 72.

4.2 The Reply Confirms That Claimant's Valuation Of The Tin Smelter Is Flawed And Grossly Inflated

559. Claimant's valuation of the Tin Smelter is unrealistic. Were the Tribunal to award the damages claimed (*quod non*), Claimant would be overcompensated contrary to international law (**Section 4.2.1**). [redacted] the valuation of the Tin Smelter is premised on a negligent, unreasonable and misinformed willing buyer (**Section 4.2.3**). In any event, Claimant's valuation should be rejected outright as it continues to rely on RPA's unduly high production and revenues forecasts, and underestimated operating and capital expenses (**Section 4.2.4**).

4.2.1 Claimant's Valuation Of The Tin Smelter Is Unrealistic And Were The Tribunal To Award The Damages Claimed (*Quod Non*), Claimant Would Be Overcompensated Contrary To International Law

560. Compass Lexecon projects the Tin Smelter's future cash flows through 2026 (the year RPA estimates that the Smelter's production life will come to an end[835]) and then discounts them back to 8 February 2007 to obtain its NPV as of the valuation date.[836] According to Compass Lexecon, the FMV of the Tin Smelter as of 8 February 2007 would be US$ 63.9 million (without interest),[837] *i.e.*, US$ 2 million less than the value estimated in its First Expert Report.[838] In addition, the exaggeration in the FMV calculated by Claimant for the Tin Smelter is compounded by its claim for interest since 2007 at an 8.6% rate – in other words, interest accounts for 65.74% of the total value claimed for the Tin Smelter (US$ 162.4 million).

561. Claimant's valuation of the Tin Smelter remains unrealistic when compared to the Smelter's historical operational performance.

562. Compass Lexecon's valuation is also inconsistent with the Tin Smelter's historical performance. Bolivia demonstrated, in its Statement of Defence, that RPA's assumptions regarding the Tin Smelter's production capacity, costs and ingot sales prices could not be reconciled with its historical data.[839] It is instructive that Claimant did not even attempt to

835 2020 RPA Model, January, 2020, **RPA-55 Bis**.

836 Compass Lexecon Updated Vinto Valuation, **CLEX-41**.

837 Compass Lexecon II, ¶ 145.

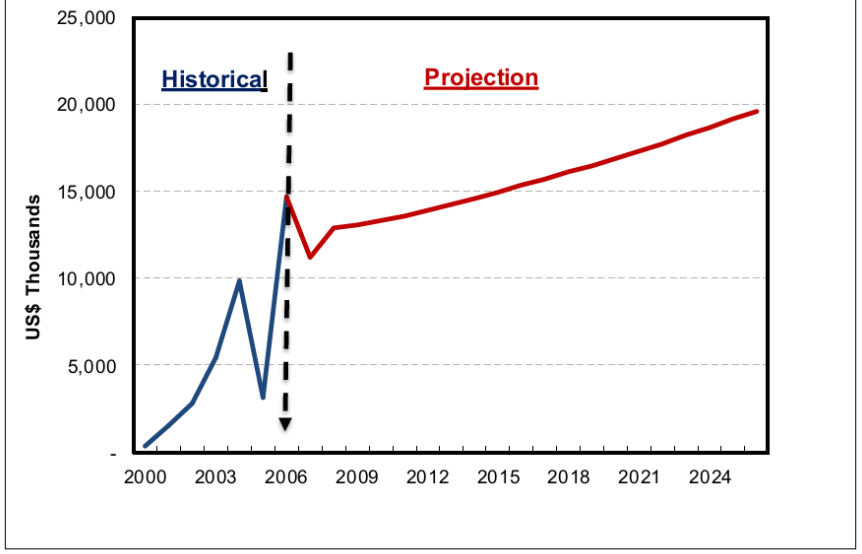
838 Compass Lexecon I, ¶ 100.

839 Statement of Defence, ¶¶ 854-876.

address this issue in its Reply on Quantum. Instead, Compass Lexecon continues to base its inflated valuation in RPA's demonstrably unrealistic assumptions.

563. While the Tin Smelter's EBITDA ranged between US$ 0.4 million and US$ 14.7 million for the 7 years leading up to the valuation date,[840] and between US$ 3.1 million and US$ 14.7 million when the Smelter was operated by Glencore, Compass Lexecon's valuation assumes that such EBIDTA would have been approximately 3 times higher during the next 20 years, as illustrated in the following figure:[841]

Figure 7
Historical EBITDA vs Compass Lexecon's Projected EBITDA for Vinto[162]



564. In Compass Lexecon's updated model for Vinto, submitted with Claimant's Reply on Quantum, the average EBITDA projected from 2007-2026 is US$ 15.61 million, therefore still about three times that of the historical period.[842]

565. As explained by Dr Flores in his First Report,[843] this artificial surge in profitability projected by Compass Lexecon is the result (and evidence of) Compass Lexecon using RPA's incorrect

840 Econ One, ¶¶ 100-101.

841 Compass Lexecon Vinto Valuation, **CLEX-2**, tab "FCF"; DCF and Calculations (Vinto), **EO-03**, DCF and Calculations (Vinto), Table 7. As Quadrant explains, "*[t]he average EBITDA for 2000-2006 was US$5.42 million and the average EBITDA projected by Compass Lexecon from 2007-2026 is US$15.66 million. Thus, Compass Lexecon's projected EBITDA levels are on average approximately three times that of the historical period*." Econ One, Figure 7 and footnote 163.

842 Compass Lexecon Updated Vinto Valuation, **CLEX-41**, tab "FCF".

843 Econ One, Figure 7.

and inflated assumptions regarding production levels, ingot sales prices, and costs (as addressed in Section 4.2.4 below).

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4.2.3 Claimant's Valuation Of The Tin Smelter Is Premised On A Negligent And Misinformed Willing Buyer

592. As mentioned in Section 4.1.3 above and in the Statement of Defence,[886] the FMV standard relies on reasonable, well-informed and prudent willing buyers and sellers.[887]

593. Compass Lexecon's FMV model for the Tin Smelter, however, is premised on a negligent and misinformed willing buyer that would have ignored (i) the poor condition of the Tin Smelter's productive units due to lack of investment after privatization (which turned the Smelter into "*a 'ghost' plant*"[888]); (ii) its regular historical performance, which was far below the estimates used by Claimant to determine the FMV of the Smelter; (iii) the reality of Bolivia's tin market and the decrease of the tin concentrates' average grade ; and (iv) Bolivia's political context and the known circumstances surrounding Glencore International's

884 [redacted]

885 [redacted]

886 Statement of Defence, ¶¶ 693-699.

887 Arbitral tribunals consistently look at "*the price that a willing buyer would pay to a willing seller in circumstances in which each had good information, each desired to maximize his financial gain, and neither was under duress or threat*" (*Starrett Housing Corporation and others v Government of the Islamic Republic of Iran,* Final Award (1987-Volume 16) Iran-US Claims Tribunal Report, **CLA-11**, ¶ 277); and "*[w]here tribunals have measured compensation by reference to the fair market value of an investment, i.e., the amount a hypothetical willing buyer would pay for the investment, they have tended to take account for the impact of business risks on fair market value*" (S. Ripinsky and K. Williams, *Damages in International Investment Law*, British Institute of International and Comparative Law, 2008 (extract), **RLA-89**, p. 334).

888 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**, p. 2.

acquisition of the Tin Smelter in March 2005, especially the irregularities in the privatization processes and the repeated calls for reversion of the asset.

594. Contrary to Compass Lexecon's assumptions, a reasonable, well-informed and prudent willing buyer would have factored in, at least, these four considerations in defining the price it would be willing to pay for the Tin Smelter:

595. *First*, as acknowledged by Claimant following its due diligence visit to Vinto in November 2004, the Tin Smelter was "*a 'ghost' plant as more or less 70 % of the shops are closed or not operated any more […] a rather large plant but its operations are small ones*"[889] where most production units had been decommissioned.[890] The Smelter's furnaces and production units were old and obsolete (*i.e.*, had been in operations for more than 30 years without any major capital investment since the State's significant investments in 1997[891]).

596. After its acquisition in 2005, Claimant did not undertake any investments, but rather engaged in minimal routine maintenance expenses:[892]

> *Resultado de la falta de inversión, como ya expliqué, en mayo de 2006 (a mi salida de Vinto), estábamos operando los hornos que seguían en funcionamiento (que tenían entre 30-35 años) al límite para producir 11.400 TMF de estaño metálico al año […] los sistemas de apoyo en las unidades principales (como radiadores, condensadores, casas de filtros y golpeadores de sistema de filtros) requerían una renovación total. Glencore había limitado sus inversiones al mínimo para simplemente mantener el proceso operativo.*[893]

597. As put by Eng Villavicencio, Claimant's practice was to "*usa[r] los equipos disponibles con las mínimas inversiones posibles para así maximizar los beneficios.*"[894]

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889 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310** p. 2.

890 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**, pp. 4-5 ("*There are four roasting furnaces but only one is working […]. There are still another battery of two others reverberatory furnaces (35 m2) not more in use, as well as a "cyclon furnace" which is also stopped*.").

891 Villavicencio I, ¶¶ 35-36; Final Report, "Optimization Study for the Empresa Metalúrgica Vinto", Volume II, **R-45**; Project for Paving of the Roads of the Empresa Metalúrgica Vinto, including Water Drainage, Volume 1, **R-47**; Documents produced by Claimant for Request 29, **R-508**; Documents produced by Claimant for Request 30, **R-509**.

892 Rejoinder on the Merits, ¶ 210-212; Statement of Defence, ¶¶ 151-154; Villavicencio I, ¶¶ 39, 75-85; Villavicencio II, ¶ 7; Complejo Metalúrgico Vinto S.A., 2005, Vinto S.A. December 2005 Report (Extracts), **RPA-19**; Complejo Metalúrgico Vinto S.A., 2005, Vinto S.A. Monthly Report December 2005 (Extracts), **RPA-20**; Complejo Metalúrgico Vinto S.A., 2006, Vinto S.A. December 2006 Report (Extracts), **RPA-21**; RPA I, ¶¶ 202-203; RPA II, ¶ 229; Documents produced by Claimant for Request 32, **R-510**.

893 Villavicencio III, ¶¶ 31-32 (Unofficial translation: "*As a result of the lack of investment, as I already explained, in May 2006 (when I left Vinto), we were operating furnaces that were still operational (they were about 30-35 years old) at maximum capacity to produce 11.400 MT of metallic tin per year […] the support systems in the main units (like radiators, filters and filtration system) required complete overhaul. Glencore had limited its investment to the minimum necessary to simply keep the operative process.*").

894 Villavicencio III, ¶ 45 (Unofficial translation: "*us[e] the available equipment with minimum investment so as to maximise profits*").

598. Claimant and its experts have failed to address the evidence adduced by Bolivia concerning the condition of the Tin Smelter's productive units as of 2007, such as the Smelter's monthly reports on the operating and decommissioned units.[895] Neither does Claimant or its witness Mr Eskdale rebut the specific description provided by Eng Villavicencio:

> *Curiosamente, el Sr. Eskdale no se pronuncia sobre el estado de funcionamiento de los hornos recogido en el Balance de enero de 2007, que incluí en mi Primera Declaración, y que muestra las unidades paradas entre el 1 y el 31 de enero de 2007 (que son las mismas que expliqué llevaban años fuera de servicio).*[896]

599. Much like Claimant did in 2004 when it described the Tin Smelter as a "*ghost plant*", any willing buyer performing due diligence of the Tin Smelter in early 2007 would have concluded that significant refurbishment and modernization costs were necessary to maintain production levels (even more so to increase production).

600. *Second*, any willing buyer would also have considered the Tin Smelter's historical performance.

601. It is undisputed that the Smelter had been consistently producing around 10,000-11,000 tonnes of ingots since 1998:

602. A reasonable, well-informed and prudent willing buyer would not have assumed an immediate 21.8% increase in production – as Claimant allegedly expected[897] – in the following two years, without accounting for significant capital investments. Any willing buyer would have concluded that Claimant's 14.000 tonnes of tin ingots estimate is unrealistic, given that Claimant's productions levels (while it operated the Tin Smelter at maximum capacity from 2005 to February 2007) remained stable at around 11.400 tonnes of ingots even though it had

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895 List of the main production units in service and out of service from January 2006 to the end of January 2007, **R-68**

896 Villavicencio III, ¶ 36 (Unofficial translation: "*Oddly enough, Mr. Eskdale does not mention the status of the furnaces reported in the January 2007 Balance, that I include in my First Declaration, and that shows the stopped units between the 1st and 31st of January 2007 (which are the same ones that I explained have been out of service for years).*").

897 Reply on Quantum, ¶ 123.

plenty of concentrates available[898] (to the point that, as explained below, metal would remain in the process pipeline as Claimant's furnaces lacked the capacity to extract all metal the first time around during the smelting process[899]).

603. *Third*, a reasonable, well-informed and prudent willing buyer would have also been aware of the evolution of the Bolivian tin market and that the average grade of the tin concentrates produced by the Tin Smelter's main suppliers had been declining, entailing: (i) a limitation to the Tin Smelter's future production of ingots; (ii) a necessary processing of larger quantities of concentrates only to maintain the same levels of production (as the amount of pure tin (grade) in the concentrate would decrease, more concentrate is needed to obtain the same levels of fine metal production), with the corresponding increase in costs; and (iii) more capital investments to increase the Smelter's capacity to process a larger lower-grade concentrate input.

604. Conversely, RPA and Compass Lexecon assume a constant average grade of 48.75% Sn, notwithstanding the fact that Bolivia already levied these criticisms in its Statement of Defence. Nowhere does RPA explain why the grade would remain constant or where such high-grade concentrate supply would come from.

605. *Fourth*, as Bolivia explained in its Statement of Defence[900], as of 2005, it was publicly known that the State was considering regaining ownership of the Tin Smelter. As discussed above[901] and in Bolivia's prior submissions,[902] the Tin Smelter's privatization had been plagued with irregularities (as Allied Deal's bid did not comply with the Terms of Reference),[903] and the Smelter had been later acquired by former President Sánchez de Lozada,[904] who sold it to Glencore International after fleeing Bolivia following accusations of having committed genocide and violated individual rights and guarantees.[905] These irregularities – and the former President's subsequent acquisition of the Smelter – had prompted multiple public

898 RPA II, Figure 12.

899 See Section 4.2.4.1 below. See also Villavicencio III, ¶¶ 47-50.

900 Statement of Defence, Section 2.5.4.

901 See Section 3.2.2 above.

902 Rejoinder on the Merits, Section 2.4; Statement of Defence, Section 2.4.

903 Rejoinder on the Merits, ¶¶ 111, 118; Statement of Defence, ¶ 73.

904 Rejoinder on the Merits, ¶ 125; La Patria, *Liquidador de Allied Deals pidió $US 6 millones por Vinto y Huanuni*, press article of 2 June 2002, **R-149**; La Prensa, *Comsur será operadora de Vinto, es dueña del 51% de las acciones*, press article of 6 June 2002, **R-150**.

905 Rejoinder on the Merits, ¶¶ 152-154; First Request for the Opening of Criminal Responsibility Proceedings Against Sánchez de Lozada and Others from National Representatives of 20 October 2003, **R-307**.

demands for the reversion of the Tin Smelter to the State since as early as 2001.[906] Hence, any willing buyer as of February 2007 would have factored in such risk in its valuation.[907] Claimant simply ignores this.

4.2.4 In any event, Claimant's Valuation Of The Tin Smelter Is Grossly Inflated

606. Claimant's valuation of the Tin Smelter adopts RPA's unreasonable forecasts for the Tin Smelter's key value drivers: extremely high tin ingot production forecasts (**Section 4.2.4.1**); unduly high and implausibly constant average concentrate grades (**Section 4.2.4.2**); unduly high and implausibly constant recovery rates (**Section 4.2.4.3**); unsupported high tin ingot sale price estimates (**Section 4.2.4.4**); and implausibly low operating and capital expenditures (**Section 4.2.4.5**). Given that the inputs (RPA's) used in Compass Lexecon's model are wrong, so is its valuation.[908]

4.2.4.1 Claimant and its experts rely on unduly high tin ingot production forecasts

607. Based on RPA's Second Report,[909] Claimant posits that "*Vinto would have modestly increased the Tin Smelter's processing rate from 25,161 tonnes of tin concentrate in 2006 to […] 30,000*

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906 Statement of the Oruro Civic Committee, **R-122**; Letter from the President of the Oruro Civic Committee to the *Contralor General de la República* of 21 February 2001, **R-123**; Letter from Representative Pedro Rubín de Celis to the *Contralor General de la República* of 10 May 2001, **R-124**; Letter from the Oruro Central Obrera to President Banzer Suárez of 23 May 2001, **R-126**; Letter from the *Federación Regional de Cooperativas Mineras de Huanuni* to President Quiroga Ramírez of 20 May 2002, **R-142**; *DDHH pide que el Estado intervenga, Brigada Parlamentaria pide preservar fuentes de trabajo*, press article, **R-137**; La Patria, *Cooperativistas amenazan con la toma de la empresa*, press article, **R-139**.

907 *Tidewater Investment SRL and Tidewater Caribe, C.A. v. The Bolivarian Republic of Venezuela*, ICSID Case No. ARB/10/5, Award of 13 March 2015, **RLA-60**, ¶¶ 186-187 ("*[T]he country risk premium quantifies the general risks, including political risks, of doing business in the particular country, as they applied on that date and as they might then reasonably have been expected to affect the prospects, and thus the value to be ascribed to the likely cash flow of the business going forward. The inclusion of a country risk premium is a very common feature of tribunals' calculations of compensation, since, as one tribunal observed 'the fundamental issue of country risk [is] obvious to the least sophisticated businessman'*"); *Amoco International Finance Corporation v Government of the Islamic Republic of Iran and others*, Partial Award (1987-Volume 15) Iran-US Claims Tribunal Report, **CLA-10**, ¶ 247 ("*The risk of [a legal] expropriation, to be sure, would have constituted a deterrent for any prospective investor, especially if such a taking might occur in the near future. Furthermore, as noted before, compensation in such case of lawful expropriation does not mean restitution integrum, as reducing the risk to zero presupposes. In fact, expropriated oil companies have often found it to be in their best interest to accept settlements at net book value of the expropriated asset. Even if such a concession was usually made in the framework of a broader, positive commercial arrangement, this cannot be construed as nullifying the risk of expropriation*."); *Venezuela Holdings, B.V. and Others v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB/07/27, Award of 9 October 2014, **RLA-65**, ¶ 365 ("*The Tribunal finds that, it is precisely at the time before an expropriation (or the public knowledge of an impending expropriation) that the risk of a potential expropriation would exist, and this hypothetical buyer would take it into account when determining the amount he would be willing to pay in that moment*"); *ConocoPhillips Petrozuata B.V. and others v. Bolivarian Republic of Venezuela*, ICSID Case No ARB/07/30, Award of 8 March 2019, **RLA-203**, ¶ 907 ("*The Claimants, however, go too far when they submit that no expropriation risk should be considered. This is not correct in view of the protection provided by the BIT against illegal acts committed by the host State, which delineate, conversely, the scope left for legal intrusions from the State affecting the economics of an investment. Thus, expropriation is permitted within the limits determined by Article 6 of the BIT. This includes the right of the investor to be awarded "just compensation". As the Claimants have submitted this standard is not as exact as full reparation, with the effect that if just compensation is actually paid, the investor must assume the risk of being deprived of compensation allowing full recovery for the loss suffered. To this extent, the Treaty protection has its limits, which translate into a risk inherent to the investment.*").

908 Statement of Defence, ¶ 853 and Section 7.3.5.1.

909 RPA II, ¶ 217.

tonnes of tin concentrate a year [from 2008 onwards]",[910] which would have resulted in the production of 14,000 tonnes of tin ingots per year starting in 2008 through 2026. Although Claimant self-servingly characterises its projected increase as "*modest*," such increase actually translates into a 20% surge in the Tin Smelter's processing capacity and a 21.8% surge in its production of tin ingots from the 11,400 tonnes of tin ingots per year produced by Claimant in 2005 and 2006.[911] This so-called "*modest*" increase would not only have occurred within one year, but "*without expanding the existing infrastructure.*"[912]

608. *In limine*, as a threshold matter, the key value driver for the Tin Smelter's revenues is the tin ingot production rate (*i.e.*, the final result of the smelting process measured in metric tonnes of fine metal in the form of ingots for sale), which should not be confused with the Smelter's processing capacity (*i.e.*, the amount of tin concentrates fed into the furnaces along with additives for smelting, measured both in dry metric tonnes and net metric tonnes).[913] While both the processing capacity and the production rate are considered in the analysis of the Tin Smelter's performance, only the production rate is a key variable for the Tin Smelter's DCF model (as Claimant itself recognizes).[914]

609. Claimant's unduly high tin ingot production forecasts are plainly wrong and inflated for, at least, three reasons: (i) they rely on production estimates that are inconsistent with the Tin Smelter's historical performance both *ex ante* and *ex post*; (ii) they fail to consider the real conditions of the Smelter's available productive furnaces and units; and (iii) they are unrealistic given the tin concentrate market in Bolivia.[915]

610. *First*, RPA's production forecasts are inconsistent with the Tin Smelter's performance, both *ex ante* and *ex post*.[916] If the Tin Smelter could really increase production by 21.8% as easily as Claimant posits ("*without expanding the existing infrastructure*"), why did Claimant's production remain at about 11,400 tonnes of ingots per year in 2005 and 2006?

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910 Reply on Quantum, ¶ 123 (emphasis added).

911 11,401 tonnes in 2005 and 11,403 tonnes in 2006. Production history of the Empresa Metalúrgica Vinto 1995-2017, **R-78**. Claimant states that the Tin Smelter produced 11,720 tonnes in 2006 but does not indicate the source of this data. Reply on Quantum, ¶ 123.

912 Reply on Quantum, ¶ 126.

913 Villavicencio III, ¶ 22.

914 Reply on Quantum, ¶ 122.

915 Statement of Defence, ¶¶ 855-89.

916 Statement of Defence, ¶ 855.

611. The Parties' mining experts have evaluated the Tin Smelter's performance by considering both the processing capacity and its production rate. Yet, RPA misleadingly presents the Smelter's performance data in, at least, two ways:

612. One, RPA refers to the Tin Smelter's production levels between 1995 and 1997 to argue that it would be capable of achieving its inflated production estimates.[917] RPA, however, fails to acknowledge the exceptional circumstances that caused those high production levels.[918]

613. Historically, the Tin Smelter achieved its *highest* processing and production rates between 1992 and 1997. This was due to two factors: (i) the modernization of the Smelter carried out by the State through an investment of over US$ 17 million (including the change of its energy source from fuel to natural gas and the installation of electro-thermal crystallizers for the metal refining process, substituting the previous process by electrolysis),[919] and (ii) an increase in the quantity of available concentrates by virtue of a toll contract with the Peruvian mining company Minsur S.A.. In 1992, the Tin Smelter processed 3,000 dry metric tonnes ("**DMT**")[920] of tin concentrate from Minsur. In the following years, an average of 10,200 DMT of concentrates from Minsur was processed every year, which contributed to the increase in production at the Tin Smelter:

917 RPA II, ¶ 219.

918 Empresa Metalúrgica Vinto Production History 1995-2019, **R-401**.

919 Villavicencio I, ¶¶ 32-34; Empresa Metalúrgica Vinto Annual Report 1993-1994, **R-43**, p. 54 of the pdf; Final Report, "Optimization Study for the Empresa Metalúrgica Vinto", Volume I, **R-44**, pp. I-4, I-13; Final Report, "Optimization Study for the Empresa Metalúrgica Vinto", Volume II, **R-45** pp. II-107-II-111.

920 Empresa Metalúrgica Vinto Annual Report 1993-1994, **R-43**, p. 37 of the pdf.

Tin Smelter's Production (1992-1997)					
Year	**Concentrates from Minsur (DMT)**	**Total Processed Concentrates (DMT)**	**Average Grade of Concentrates (%Sn)**	**Semi-Refined Tin (weight in tonnes and grade)**	**Production (tonnes of ingots)**
1992[921]	3,000	30,208	-	-	14,523
1993[922]	-	42,338	-	-	18,518
1994[923]	12,000	43,139	-	-	20,056
1995[924]	10,572	37,689	48.2%	251.8 (94.2%)	17,663
1996[925]	10,752	35,197	48.3%	701.5 (96.6%)	16,689
1997[926]	7,810	33,502	47.49%	1,156 (98.7%)	16,849

614. In addition, between 1995 and 1997, the Tin Smelter also processed semi-refined tin from another smelter operating in the city of Oruro at the time (Operaciones Metalurgicas S.A., "**OMSA**"), as seen in the table above (fifth column from the left). Notwithstanding the seemingly small quantities, the processing of semi-refined tin contributed to the annual production of tin ingots, due to the high grade of the processed metal.

615. Yet, from 1998 until the reversion in February 2007, the Tin Smelter never again processed 30,000 DMT of tin concentrates and did not even come close to the 14,000 tonnes of produced ingots estimated by RPA:[927]

921 Empresa Metalúrgica Vinto Annual Report 1993-1994, **R-43**, p. 23 of the pdf.

922 Empresa Metalúrgica Vinto Annual Report 1993-1994, **R-43**, p. 23 of the pdf.

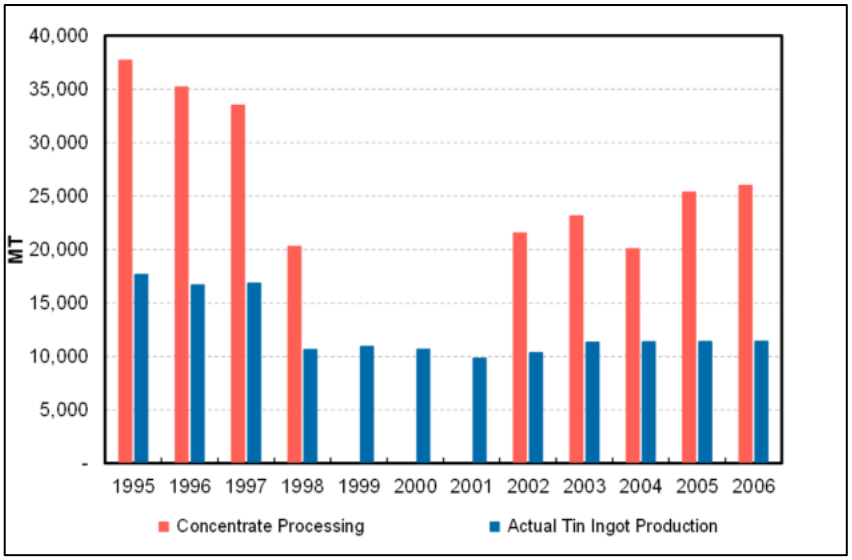
923 Empresa Metalúrgica Vinto Annual Report 1993-1994, **R-43**, p. 37 of the pdf.

924 Vinto Production Metallurgical Balance 1995, **R-48**, p. 1.

925 Vinto Production Metallurgical Balance 1996, **R-49** p. 23.

926 Vinto Production Metallurgical Balance 1997, **R-50**, p. 1.

927 Quadrant II, Figure 12 (extract).



616. In its Reply on Quantum, Claimant avoids analysing the Tin Smelter's historical performance, and instead disingenuously relies on a table included in Eng Villavicencio's First Witness Statement (to show the advantages of the Ausmelt unit in comparison to the older furnaces) in an attempt to justify its inflated projections for the Smelter's processing capacity:[928]

Variable	Horno de Reverbero	Horno Eléctrico de Arco	Horno Ausmelt
Superficie Ocupada	50 m2	18 m2	36 m2
Capacidad de Trabajo	40 a 50 T/proceso	40 a 50 T/días	50 T/proceso
Tiempo de Proceso	20 a 25 horas	24 horas	10 a 12 horas
Fuente de Energía	Gas Natural (otros)	Eléctrica	Gas Natural
Tamaño de Carbón	5 a 25 mm	10 a 25 mm	5 a 15 mm
Tipo de Refractarios	Cromomagnesita en la región del baño. Sílice o Alta Alúmina en el resto de la mampostería	Cromomagnesita en la región del baño.	Cromomagnesita, 50 % MgO, Silico aluminoso
Mezclado de Carga Fundida	Mala, es necesario remover en intervalos de tiempo	Buena, por convección de las corrientes de calor en el interior del baño	Muy buena, bastante flujo en el interior del baño por la lanza sumergida
Eficiencia Térmica	20 a 30 %	60 a 80 %	> a 80 %
% Sn en la Escoria	10 a 15 %	12 a 18 %	< a 1 %

617. According to Claimant, this table would confirm "*that the three smelting furnaces that Vinto was operating as of February 2007 [i.e., two reverberatory and one electric furnace] would have had an aggregate processing capacity of 30,600 to 38,250 tonnes of tin concentrate a year*."[929] Claimant is wrong.[930]

618. As Eng Villavicencio explains, on the one hand, the furnaces have a design or theoretical maximum processing capacity (indicated in the table above). If the units are not in good

928 Reply on Quantum, ¶ 126; Villavicencio I, ¶ 56.

929 Reply on Quantum, ¶ 126.

930 This account of the operation of the furnaces is confirmed by Claimant's own description of the smelting process in its due diligence of Vinto: "*roasted material mixed with fluxes and charcoal and recycled pellets will be charged at two type of furnaces*." Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**, p. 5.

condition (as in the Tin Smelter), they cannot reach said capacity and the processing time is increased.[931] On the other hand, Eng Villavicencio also explains that the smelting process requires more than concentrates:

> *el concepto de "Capacidad de Trabajo" de los hornos (tercera línea del cuadro) se refiere a todo el material que se vierte en los hornos para el proceso de fundición. Como muestran las recetas del proceso de fundición (es decir, las indicaciones exactas sobre las cantidades de materiales que deben incorporarse al proceso), la alimentación de los hornos reverberos no es solamente concentrados de estaño (los concentrados, por sí solos, no se funden, obviamente), también ingresan cenizas de refinación térmica, carbón vegetal, caliza, arena silícica, hematita y otros aditivos necesarios para asegurar la producción final con una recuperación metalúrgica en horno reverbero del 75 a 80%.*[932]

619. The design capacity, therefore, refers to the weight of the total material that is processed in the furnaces. Claimant's argument is, thus, unavailing. In any case, the table Claimant refers to had been included in Villavicencio's First Witness Statement not to demonstrate the capacity of the Tin Smelter's furnaces at a given time, but to show the advantages of the Ausmelt in comparison to the older furnaces, in terms of their characteristics by design (*i.e.*, not the actual capacity of the reverberatory and electric furnaces at the time of the reversion).

620. During Claimant's operation of the Tin Smelter, the available furnaces were working at maximum capacity.[933] The 2006 and January 2007 *Balances Metalúrgicos* (documents that detail the performance of the metallurgical processes achieved every month and record the efficiency of the metallurgical plant) show that, although Claimant purchased large quantities of high-grade concentrates, production remained steady (around 11,400 tonnes of ingots per year). In fact, the (poor) condition of the furnaces was such that Claimant was not able to even process all the purchased concentrates and excess material consistently remained in the pipeline (referred to as "*circuito*").[934] For instance, as demonstrated by the *Balance Metalúrgico* below, in May 2006, Sinchi Wayra processed 3,159 DMT of concentrates of a very high grade (50.53%, which means that the tin processed corresponds to 1,596 tonnes of

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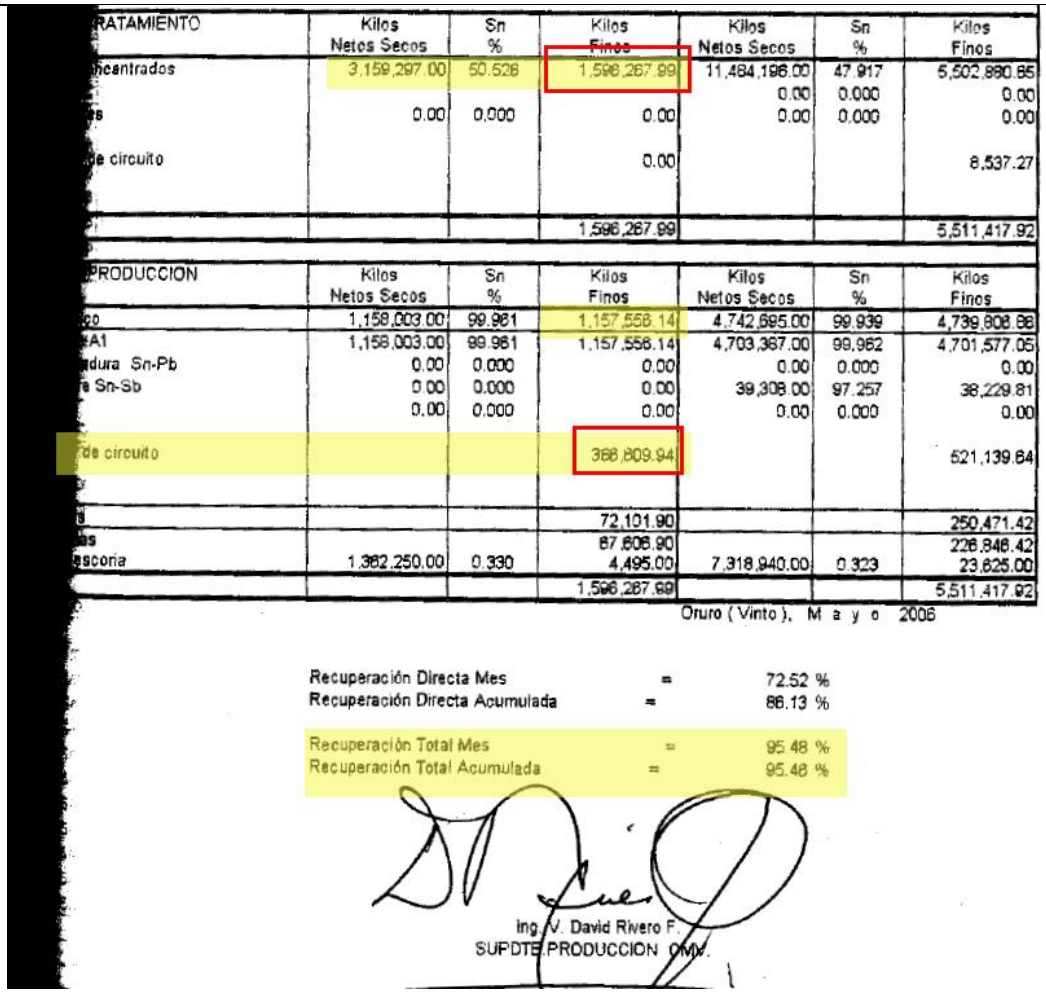
931 Villavicencio III, ¶ 30.

932 Villavicencio III, ¶ 25 (Unofficial translation: "*the "Work Capacity" of the furnaces (third row in the table) refers to all the material that is fed into the furnaces for the smelting process. As the recipes of the smelting process show (i.e., the exact indications of the amount of materials that should be used in the process), the reverberatory furnace's feed not only consists of tin concentrates (the concentrates, do not melt down by themselves, obviously), but thermic refining ashes, charcoal, limestone, siliceous sands, hematite and other additives needed to ensure the final production with a metallurgical recovery in the furnaces of about 75%-80%.*").

933 Villavicencio III, ¶¶ 47-50.

934 Villavicencio III, ¶¶ 47-48.

fine metal). Yet, the Tin Smelter only produced 1,157 tonnes of tin ingots that month, despite a reported recovery rate of 95%, thus, leaving 366 tonnes of fine metal in the pipeline:[935]



RATAMIENTO	Kilos Netos Secos	Sn %	Kilos Finos	Kilos Netos Secos	Sn %	Kilos Finos
ncentrados	3,159,297.00	50.528	1,596,267.99	11,484,198.00	47.917	5,502,880.85
				0.00	0.000	0.00
s	0.00	0.000	0.00	0.00	0.000	0.00
e circuito			0.00			8,537.27
			1,596,267.99			5,511,417.92

PRODUCCION	Kilos Netos Secos	Sn %	Kilos Finos	Kilos Netos Secos	Sn %	Kilos Finos
co	1,158,003.00	99.961	1,157,556.14	4,742,695.00	99.939	4,739,908.88
A1	1,158,003.00	99.961	1,157,556.14	4,703,367.00	99.962	4,701,577.05
dura Sn-Pb	0.00	0.000	0.00	0.00	0.000	0.00
e Sn-Sb	0.00	0.000	0.00	39,308.00	97.257	38,229.81
	0.00	0.000	0.00	0.00	0.000	0.00
de circuito			366,809.94			521,139.64
			72,101.90			250,471.42
s			67,606.90			226,846.42
scoria	1,362,250.00	0.330	4,495.00	7,318,940.00	0.323	23,625.00
			1,596,267.99			5,511,417.92

Oruro (Vinto), M a y o 2006

Recuperación Directa Mes = 72.52 %
Recuperación Directa Acumulada = 86.13 %

Recuperación Total Mes = 95.48 %
Recuperación Total Acumulada = 95.48 %

Ing. V. David Rivero F.
SUPDTE PRODUCCION OMV.

Extract of the Metallurgical Balance of May 2006[936]

621. Two, although post-reversion (*ex post*) data is irrelevant hindsight for the valuation of the Tin Smelter as of the valuation date (given that both Parties agree the asset must be valued *ex ante*), Claimant cherry picks data from the State's operation of the Tin Smelter in an attempt to find some support its unreasonable projections. Claimant misleadingly states that "*Bolivia's own data shows that from 2012 through 2014 [the Tin Smelter] reached processing levels similar to those forecasted by Glencore Bermuda – i.e., processing on average 29,500 tonnes of concentrate per year during this period without expanding the existing*

935 Vinto Production Metallurgical Balance 2006, **R-56**, p. 5; Villavicencio III, ¶ 48. Mr Villavicencio also demonstrated that this practice continued until December 2006.

936 Vinto Production Metallurgical Balance 2006, **R-56**, p. 5.

infrastructure and using the same smelting furnaces that were operational as of February 2007."[937] Claimant is mistaken for, at least, three reasons:

- Claimant does not make any reference to the Tin Smelter's tin ingot production rates after the reversion. The Tin Smelter's 2012-2014 concentrate processing capacity in itself does not support Claimant's case. Claimant focuses in the quantity of concentrates processed, ignoring their average grade and, most importantly, the ensuing production. While the Tin Smelter did process over 28,000 DMT of concentrate per year between 2012 and 2014,[938] this increased feed did not generate an equivalent increase in the amount of produced ingots.[939] During these three years, the Tin Smelter produced an average of 11,521 tonnes of ingots (that is, a production rate comparable to Claimant's 2005-2006 production).[940] The increased feed was due to the fact that, to compensate for the lower grade of concentrates since 2008 (when the Huanuni Mine started producing "*concentrados selectivos*," with an average grade of only 35% Sn), the Tin Smelter had to increase the quantity of processed concentrate only to maintain production levels.[941]

- The enhanced processing capacity between 2012 and 2014 was not achieved "*without expanding the existing infrastructure*", as Claimant would have the Tribunal believe.[942] After the reversion, while the new Ausmelt furnace (an investment of US$ 39 million ignored by Claimant in its projections) was under construction, Bolivia invested, approximately, US$ 1 million in 2011 to repurpose the furnaces of the Antimony Smelter to process tin concentrates in order to increase the quantities of low-grade tin concentrates that could be processed by the EMV.[943] Even with this investment to expand existing infrastructure, the Tin Smelter was only able maintain its production levels, adapting to the lower grade of the concentrates available in Bolivia.[944] However, the operation without the Ausmelt

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937 Reply on Quantum, ¶ 126 (emphasis added).

938 In 2012, 28,856 DMT (Vinto Production Metallurgical Balance 2012, **R-62**), in 2013, 29,966 DMT (Vinto Production Metallurgical Balance 2013, **R-63**) and in 2014, 29,603 DMT (Vinto Production Metallurgical Balance 2014, **R-64**) of processed concentrates.

939 The reasons for this are further discussed below. See Section 4.2.4.2 below.

940 Empresa Metalúrgica Vinto Production History 1995-2019, **R-401**.

941 Empresa Metalúrgica Vinto Technical Report, **R-400**.

942 Reply on Quantum, ¶ 126.

943 Villavicencio III, ¶ 54; La Patria, *Planta de antimonio fue adecuada para fundir concentrados de estaño*, press article of 22 December 2011, **R-397**; Antimony Smelter Tin Production Metallurgical Balances 2012-2014, **R-398**; Antimony Smelter Tin Production Levels 2012-2014, **R-399**.

944 See Section 4.2.4.2 below.

was not sustainable in the long run, as the costs of processing low grade concentrates were too high.[945]

- The Tin Smelter was also not operating the "*same smelting furnaces that were operational as of February 2007*"[946] in 2012-2014, contrary to RPA's misinformed assumption.[947] At the time of the reversion, the production units remained in sufferable condition due to Claimant's lack of investment[948] and had to undergo intensive overhauls post-reversion to be able to process larger quantities of (low-grade) concentrates. By 2012, Bolivia had already completed the necessary overhauls and the operating conditions were very different from the ones prevailing during Claimant's operation.[949]

622. Indeed, as Eng Villavicencio explains in his Third Witness Statement, increasing production levels at the Tin Smelter required capital investments such as:

> - *invertir en una unidad de producción adicional con la capacidad de un horno reverbero (o prever inversiones para reactivar los reverberos 1 y 2);*
> - *reducir los tiempos de procesos de 24 a 18 horas en el horno reverbero mediante la inyección de aire enriquecido (es decir, invertir en una planta de oxígeno, que son costosas);*
> - *invertir en el mantenimiento total del horno rotatorio 3, incluyendo los sistemas de enfriamiento y captación de gases y polvo, sistemas de refrigeración de aguas y otros;*
> - *incorporar al proceso otro agente reductor con mayor eficiencia térmica como carbón mineral (antracita) o incorporar el horno eléctrico de 1,5 MW para la reducción de concentrados;*
> - *invertir en un ciclón para acelerar la fusión del concentrado al ingreso a los hornos reverberos 3 y 4; o*
> - *incorporar al proceso el sistema horno ciclón y horno eléctrico de 1,5 MW en la fundición baja ley para la reducción de concentrados.*[950]

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945 Villavicencio III, ¶ 59.

946 Reply on Quantum, ¶ 126.

947 RPA II, ¶ 219.

948 Villavicencio III, ¶¶ 31-36; List of the main production units in service and out of service from January 2006 to the end of January 2007, **R-68**

949 Villavicencio III, ¶ 52.

950 Villavicencio III, ¶ 43 (Unofficial translation: "*invest in an additional production unit with the capacity of a reverberatory furnace (or anticipate investments to reactivate reverberators 1 and 2); reduce the processing times from 24 to 18 hours in the reverberatory furnace through the injection of enriched air (i.e., invest in an oxygen plant, which is costly); invest in the total overhaul of the rotatory furnace 3, including the dust and gas catchment systems as well as water cooling systems and others; incorporate another reducing agent to the process with a higher thermic efficiency such as charcoal (anthracite) or incorporate the 1,5 MW electric furnace for the concentrate reduction; invest in a*

623. Claimant was not willing to make such investments. Instead, Claimant and its experts insist that maintaining its so-called capital expenditures (between US$ 750,000 and US$ 800,000 of sustaining capital)[951] would not only suffice to maintain production levels, but also to increase them by an incredible 21.8%.

624. Assuming that, per Claimant's own account, it were possible to increase the Tin Smelter's processing capacity and production by 21.8% "*without expanding the existing infrastructure*"[952] (it is not), Claimant would more likely than not have done so while it operated the Tin Smelter in 2005 and 2006. Instead, the Tin Smelter's performance during Claimant's operation remained essentially the same as those of the final years of Comsur's operation:

	Year	Production (tonnes of ingots)[953]
Comsur	2003	11,317
	2004	11,361
Glencore	2005	11,401
	2006	11,403

625. Claimant simply never intended to increase production.

626. *Second*, RPA's projections also ignore the condition of the Tin Smelter as of February 2007. It is Claimant's burden to prove that the production units would have been able to produce the estimated 14,000 tonnes of tin ingots a year with no significant investment. Instead of doing so, Claimant has submitted an unsubstantiated production forecast and failed to address contemporary evidence that disproves its estimates.

cyclone to accelerate the fusion of the concentrate when it enters the reverberatory furnaces 3 and 4; or incorporate to the process the cyclone furnace system and the 1,5 MW electrical furnace for the reduction of concentrates in the low grade plant.").

951 RPA II, ¶¶ 229-230.

952 Reply on Quantum, ¶ 126.

953 Empresa Metalúrgica Vinto Production History 1995-2019, **R-401**; Documents produced by Claimant for Request 27, **R-511**.

627. In his First Witness Statement, Eng Villavicencio had described the dire condition of the productive units as at February 2007,[954] stating that "*se encontraban en estado obsoleto.*"[955] In its Reply on Quantum, Claimant refused to engage with this evidence. Instead, Claimant's witness, Mr Eskdale, simply dismisses Eng Villavicencio's description as being "*based on Comsur's, (not Glencore's) operations*."[956] This is false for two reasons:

628. One, Eng Villavicencio started working at the Tin Smelter in 1989 and was the Director of the Engineering and Projects Department from 2002 to May 2006.[957] His description of the condition of the Smelter is based on contemporary documents[958] and his first-hand knowledge of the Tin Smelter's operations and productive units until May 2006 (*i.e.*, 8 months prior to the reversion).

629. As contemporary documents demonstrate, as of 2007, only one of the roasting furnaces (needed in the first step of the smelting process to eliminate sulphur and arsenic from the concentrates) was operational. Roasting furnaces 2, 3 and 4 had been decommissioned since 2002.[959] Only 3 of 6 reverberatory and electric furnaces, which are the reduction units through which the tin concentrates pass on to a liquid phase (metallic tin), were operational. Reverberatory furnace 1 had been dismantled, reverberatory furnace 2 has been decommissioned as it required significant repairs in its gas and feeding systems and the 1.5 MW electric furnace had also been decommissioned. Finally, fuming furnaces 1 and 3 (which process the rich slag (8-10% Sn) that results from the reduction and smelting process to produce tin powder of 60-72% Sn that is then is recirculated into the process) had been, respectively, dismantled and decommissioned as of 2007.[960]

630. The remaining three smelting furnaces (reverberating furnaces 3 and 4 and the 3.3 MW electric furnace) and three units (fuming furnaces 2 and 4, and roasting furnace 1) required urgent overhauls to maintain production levels.[961]

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954 Villavicencio I, ¶ 47.

955 Villavicencio I, ¶ 46 (Unofficial translation: "*[they] were obsolete*").

956 Eskdale III, ¶ 65.

957 Villavicencio I, ¶ 6.

958 List of the main production units in service and out of service from January 2006 to the end of January 2007, **R-68**

959 Villavicencio I, ¶ 47; Villavicencio III, ¶ 19.

960 List of the main production units in service and out of service from January 2006 to the end of January 2007, **R-68**; Villavicencio I, ¶ 47; Villavicencio III, ¶ 19.

961 List of the main production units in service and out of service from January 2006 to the end of January 2007, **R-68**; Villavicencio I, ¶ 47; Villavicencio III, ¶¶ 19, 31, 36, 51-52.

631. As a result, the Smelter's production in 2008 dropped to 9,637 tonnes of tin ingots,[962] *i.e.*, 31% less than the 14,000 projected by RPA.[963]

632. Claimant has not rebutted Eng Villavicencio's account nor demonstrated that the conditions he describes would have changed in the few months between May 2006 and February 2007.

633. The only argument advanced by Claimant to justify the astonishing projection by RPA is the so-called "*optimization processes*," which would allegedly "*boost output by enabling Vinto to operate the three smelting furnaces more efficiently, with less down time*."[964] However, these so-called "*optimization processes*" carried out by Comsur and Claimant in the Tin Smelter between 2002 and 2006 do not, when duly understood, increase production capacity.

634. Despite bearing the burden of proving that these processes would result in the significant increase in production projected by RPA,[965] Claimant has only submitted a single document entitled "*Proyectos y trabajos ejecutados en Complejo Metalurgico de Vinto periodo 2002-2006*"[966] describing the processes undertaken between 2002 and 2006 to no with no indication of when these processes were exactly implemented in the 4-year period.

635. This presentation was prepared by Eng Villavicencio's team before he left the Tin Smelter in May 2006.[967] As such, it describes projects that had *already been implemented* as of May 2006 (with the exception of a project to capture fugitive emissions in the reverberatory furnaces, which would have been an addition to the measures already executed and had no bearing in the production rates)[968] and should, therefore, have resulted in the purported 21.8% increase in production, if not by May 2006, at the very least by February 2007. No such increase occurred, however. Claimant is, thus, suggesting that projects that had no impact on

962 Villavicencio I, ¶ 49; Empresa Metalúrgica Vinto Production History 1995-2019, **R-401**.

963 RPA II, ¶ 217.

964 Reply on Quantum, ¶ 128.

965 RPA II, ¶ 233.

966 Complejo Metalúrgico Vinto S.A., undated, Proyectos y Trabajos Ejecutados en Complejo Metalurgico de Vinto Periodo 2002-2006, **RPA-53** (Unofficial translation: "*Projects and works executed in the Vinto Metallurgical Complex – period 2002-2006*").

967 Villavicencio III, ¶¶ 40-41.

968 This is the only project that appears to be pending and Claimant has not provided any evidence of having carried it out: "*[e]ste proyecto [captación de emisiones fugitivas en los hornos reverberos] tenía que ser ejecutado hasta Junio de la presente gestión*." Complejo Metalúrgico Vinto S.A., undated, Proyectos y Trabajos Ejecutados en Complejo Metalurgico de Vinto Periodo 2002-2006, **RPA-53**, p. 9 (Unofficial translation: "*this project [capture of fugitive emissions from the reverberatory furnaces] has to be executed by June of the present year*").

the Smelter's production in the period 2002-2006[969] would suddenly cause a 21.8% surge starting in 2008. This is absurd and defies credulity.

636. In any event, Eng Villavicencio already analysed the processes described in annex RPA-53 in detail in his First Witness Statement.[970] Yet RPA refuses to engage with Eng Villavicencio's analysis and, instead, lists again the same 23 projects described in RPA-53 in Annex II of its Second Report. In this Annex II, RPA does not provide any explanation of how these processes would impact production levels, let alone cause a 21.8% increase. RPA instead admits that only 9 of those 23 projects would have "*production benefits*", while also failing to explain what the purported benefits would be. Of those 9 projects, one increased the production of tin-antimony alloy and another produced copper sulphate for sale – thus they are irrelevant to the production of tin ingots. Another one is listed twice ("*capture of fugitive emissions in [electric furnace and revebatory furnace] operation (ventilation system and dust collection improvements)*").[971] Therefore, per Claimant's and RPA's own account, only 6 projects could potentially have impacted the Smelter's production.[972]

637. Nevertheless, as explained by Eng Villavicencio, these 6 projects served, at most, to mitigate production losses (which is not the same thing as increasing production) and to improve safety and environmental conditions:

- The project referred to by RPA as "*capture of fugitive emissions [electric furnace and revebatory furnace] operation (ventilation system and dust collection improvements)*"[973] reduces the environmental impact of the smelting process, but does not increase the production of ingots;[974]
- RPA's reference to the "*installation of stand by exhaust fan system for Reverberatory Furnace 3 and 4*"[975] is simply part of the delayed repair to have the process meet industry standards of reliability. Exhaust fans extract combustion

969 Between 2002 and 2003, during Comsur's operation of the Tin Smelter, there was an increase in production of less than 10%. It is unclear whether this increase was caused by the processes implemented in 2002, as Exhibit RPA-53 describes only one process as being executed in that year. This project, however, is related to the production of tin-antimony alloy (not tin ingots). Complejo Metalúrgico Vinto S.A., undated, Proyectos y Trabajos Ejecutados en Complejo Metalurgico de Vinto Periodo 2002-2006, **RPA-53**, p. 2.

970 Villavicencio I, ¶¶ 76-85.

971 RPA II, Annex II, p. 100.

972 RPA II, pp. 100-103 (p. 100 for the tin-antimony alloy and p. 101 for the copper sulphate); Documents produced by Claimant for Request 28, **R-512**.

973 RPA II, Annex II, p. 100.

974 Villavicencio I, ¶ 83.

975 RPA II, Annex II, p. 100.

gases from the smelting process and direct them to the chimneys. Every furnace needs a stand-by fan to prevent stoppages whenever the main exhaust fan stops working (otherwise, the smelting process would have to be halted because the chamber of the furnace gets filled with gases). The installation of these fans, therefore, does not increase production, but rather minimises the risk of stopping production;[976]

- RPA also refers to "*improvements in instrumentation and process control for weighing in the pelletizing area and in electric furnace operation*",[977] but fails to really analyse what this means. This project was intended to allow for the computerised control of the dosage of concentrates and additives that are added to the smelting process. It does not increase production, but rather allows for the recipe to be properly added to the furnace, thus avoiding the higher costs of inaccurate recipes;[978]

- The "*use of more durable refractory brick in reveberatory furnaces*"[979] reduces maintenance costs, but does not increase production of tin ingots;[980]

- As to the "*installation of an Ingersol Rand compressor to supply compressed air*",[981] Claimant's own evidence shows that there was already a compressor in place, and that a new one was installed only to have a stand-by unit to avoid stoppages. Therefore, this is a maintenance measure that minimises the risk of stopping production, but does not increase production of tin ingots;[982] and

- Similarly, in relation to the "*installation of new boiler in Reverberatory Furnace 3*",[983] Claimant's own evidence clarifies that there was already a boiler in reverberatory furnace 3 that needed to be replaced due to frequent stoppages. Therefore, this is a measure that also seeks to minimise production stoppages, but

976 Villavicencio III, ¶ 41.

977 RPA II, Annex II, p. 101.

978 Villavicencio III, ¶ 41.

979 RPA II, Annex II, p. 101.

980 Villavicencio I, ¶ 82.

981 RPA II, Annex II, p. 102.

982 Complejo Metalúrgico Vinto S.A., undated, Proyectos y Trabajos Ejecutados en Complejo Metalurgico de Vinto Periodo 2002-2006, **RPA-53**, p. 33 of the pdf.

983 RPA II, Annex II, p. 103.

does not increase production,[984] as the capacity of the furnace remains the same (and it was already being used by Claimant at maximum capacity, as demonstrated above).

638. Two, neither has Claimant addressed the monthly reports of the Smelter's operating and decommissioned productive units from January 2006 to January 2007[985] or the charts prepared by Eng Villavicencio illustrating the furnaces' downtime between January 2006 and January 2007,[986] nor demonstrated that the condition of the furnaces would have changed in the few days between 31 January and 7 February 2007.

639. *Third*, Claimant's production forecasts are also untethered from the reality of the tin market in Bolivia. Claimant's experts assume that the Tin Smelter would process 30,000 DMT of high-grade concentrates resulting in 14,000 tonnes of tin ingots per year starting in 2008 through 2026,[987] yet this expected performance is not only impossible because of the state of the Smelter's available productive units (as described above), but is entirely dependent on the *assumption* that sufficient high-grade concentrates would be available in the Bolivian market.

640. In order to achieve Claimant's projected tonnage of ingots, the Tin Smelter would need to process at least 30,000 DMT of tin concentrates per year with, at least, a 48.75% Sn grade for every year from 2007 to 2026.[988] Such a large supply of high-grade tin concentrates per year is no longer available in Bolivia, as further explained below.

641. Conversely, Bolivia's expert Quadrant has assumed a reasonable and realistic production rate of 11,720 tonnes of tin ingots per year in its valuation:[989]

984 Complejo Metalúrgico Vinto S.A., undated, Proyectos y Trabajos Ejecutados en Complejo Metalurgico de Vinto Periodo 2002-2006, **RPA-53**, p. 35 of the pdf.

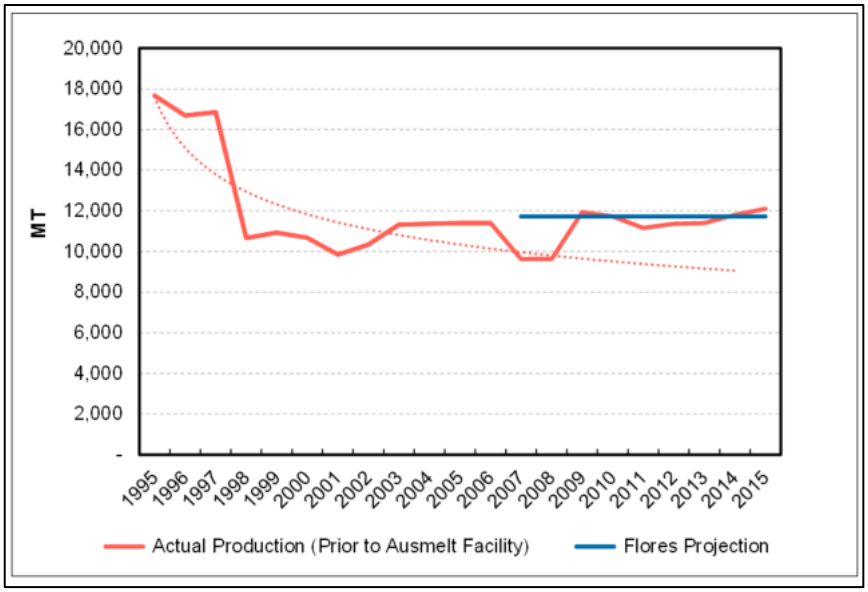
985 List of the main production units in service and out of service from January 2006 to the end of January 2007, **R-68**.

986 Villavicencio I, ¶ 47; Graphs of the main production units in service and out of service from January 2006 to the end of January 2007, **R-69**.

987 RPA II, ¶ 217.

988 Reply on Quantum, ¶¶ 123, 131.

989 DCF and Calculations (Vinto), **QE-49**.



642. Quadrant's projection is consistent with the Tin Smelter's historical tin ingot production (both before and after the reversion), assuming that there would not be significant investments (as does Claimant), and that the Smelter's productive units would have remained as they were as of February 2007.[990]

4.2.4.2 Claimant and its experts project an unduly high and implausibly constant concentrate grade

643. RPA's and Compass Lexecon's inflated production projection is entirely premised on the (unsupported) assumption that the average grade of the processed tin concentrates will remain constant at 48.75%[991] throughout the Tin Smelter's production life until 2026[992] (*i.e.*, that the grade or purity of the concentrates purchased by the Tin Smelter would not decrease despite the depletion of tin reserves in the country). This is wrong for four reasons:

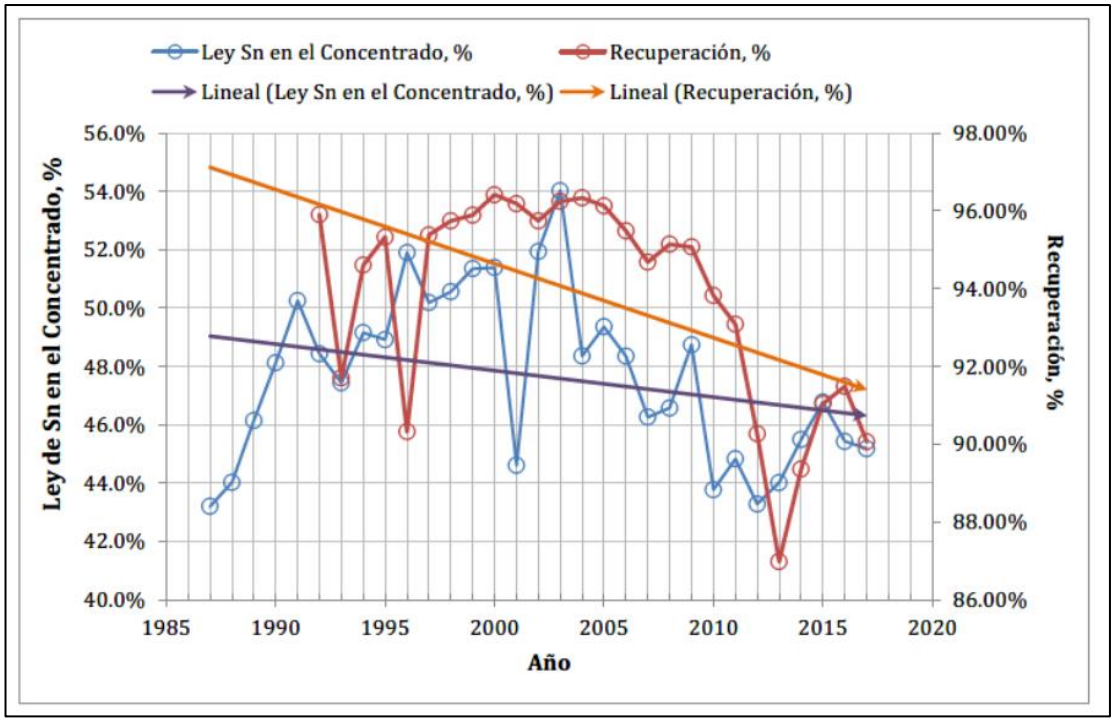
644. *First*, Claimant ignores the historical downward trend in concentrate grade. As Bolivia explained in its Statement of Defence, the Tin Smelter's historical operating performance shows that, from 1987 to date, the average grade of concentrates purchased by the Tin Smelter has been steadily declining from 50.23% in 1990 to 48.74% around 2009 and 46.77% in 2015.[993] There is no reason to assume that this trend would have shifted after 2007 (and Claimant advances none). Rather, this decline in grade has been accentuated in the years following 2007:

990 Quadrant II, ¶ 103; Econ One, ¶ 108.

991 RPA II, ¶ 199.

992 RPA II, ¶ 192-193.

993 Statement of Defence, ¶ 862; Villavicencio I, ¶¶ 67-68.



645. Claimant, however, self-servingly ignores *ex post* data in its analysis of the average grade of concentrates. The average grade of the concentrates processed at the Tin Smelter is in decline, because tin is obtained from cassiterite (a tin oxide mineral, SnO_2), usually found in shallower and more oxidised areas. As the exploitation in the Huanuni and Colquiri mines moves deeper underground into more sulphurous areas, the head grade of the extracted tin ore decreases.[994]

646. *Second*, in his First Witness Statement, Eng Villavicencio explained that Claimant's projected production rate could never be reached as there are not enough high-grade concentrates in Bolivia to bring about 14,000 tonnes of ingots with the technology available at the Tin Smelter at the time of the reversion (or even with the Ausmelt technology installed by Bolivia in 2015).[995]

647. *Third*, RPA acknowledges that "*after the nationalization of the Tin Smelter, the overall tin concentrate feed grades decline further, averaging 45.36% from 2007 to 2017*,"[996] but attributes this to "*Bolivia purchasing a higher proportion of low grade tin concentrates and*

994 Villavicencio I, ¶ 69; Villavicencio III, ¶ 70.

995 Villavicencio I, ¶ 58; Empresa Metalúrgica Vinto, Technical Operations Report 007-2019-OP, Final Evaluation of the 2018 Annual Operations Plan, **R-402**, p. 5; Empresa Metalúrgica Vinto, Report EMV-PP-INF 008/2019, Final Evaluation Report of the 2018 Annual Operations Plan and Executed Budget, **R-403**, p. 2; Empresa Metalúrgica Vinto, Technical Operations Report 187/2019-OP-IT, Monitoring of the 2019 Annual Operations Plan, **R-404**, p. 10; Empresa Metalúrgica Vinto, Report EMV-PP-INF 039/2019, Monitoring Report of the 2019 Annual Operations Plan and Executed Budget, January-September, **R-405**, p. 15; Empresa Metalúrgica Vinto, Technical Operations Report 017/2020-OP-IT, Final Evaluation of the 2019 Annual Operations Plan, **R-406**, p. 6.

996 RPA II, ¶ 204.

less high grade tin concentrates."[997] For its part, RPA self-servingly asserts that this would be due to (i) "*Colquiri's high grade concentrates being exported to Glencore's operations overseas and therefore, the material was not available to the Tin Smelter for processing*,"[998] and (ii) an increase in the input of low grade tin concentrates from a variety of sources.[999] Once again, RPA's assertions are contradicted by the contemporaneous evidence as demonstrated by the two following facts:

648. One, Colquiri's tin concentrate production between 2007 and 2012 (*i.e.*, during Claimant's operations of the Mine) was neither large enough to provide sufficient concentrates to achieve the production rates projected by Claimant for the Tin Smelter nor of sufficient purity (*i.e.*, high-grade) to support Claimant's projected high average grade.

649. The table below summarises Colquiri's tin concentrate production from 2007 to 2012, the percentage that Colquiri's concentrates represent with respect to the 30,000 DMT projected by RPA and the average grade of Colquiri's concentrates:

Year	Concentrate Production (in DMT)[1000]	% of the 30,000 DMT projected by RPA	Average Grade (%Sn)[1001]
2005	7,324	24.41%	49.99%
2006	5,095	16.98%	51.66%
2007	5,728	19.09%	47.20%
2008	5,045	12.62%	47.78%
2009	3,785	12.62%	48.58%
2010	3,794	12.50%	50.13%
2011	4,737	15.79%	47.04%
2012	2,352	7.84%	48.80%

997 RPA II, ¶ 205.

998 RPA II, ¶ 206.

999 RPA II, ¶ 206.

1000 All values are from RPA II, Table 11; Compañia Minera Colquiri S.A., 2008-2012 Colquiri Group Production Reports (Extracts), **RPA-48**, except for 2005 (Glencore, 2005, Colquiri S.A. Monthly Report December 2005 (Extracts), **RPA-33**, p. 7 of the pdf) and 2006 (Glencore, 2006, Sinchi Wayra S.A. Consolidated Management Report, December 2006 (Extracts), **RPA-34**, p. 14 of the pdf).

1001 All values are from Compañia Minera Colquiri S.A., 2008-2012 Colquiri Group Production Reports (Extracts), **RPA-48**., except for 2005 (Glencore, 2005, Colquiri S.A. Monthly Report December 2005 (Extracts), **RPA-33**, p. 7 of the

650. In 2007, the year of largest production, Colquiri produced only 5,278 DMT of concentrates, and, in 2012, the year of lowest production, 2,352 DMT – that is 5.6 and 12.7 times less than Claimant's estimated 30,000 DMT of concentrates needed by the Tin Smelter per year to achieve the projected 14,000 tonnes of tin ingots. Between 2007 and 2012, Colquiri could have at most provided 19% of the concentrates needed by the Tin Smelter to achieve the very high production projected by RPA. Claimant does not even attempt to explain where the other 81% would come from.

651. Moreover, while RPA maintains that Colquiri's tin concentrates are "*higher grade tin concentrates*,"[1002] the average grade of the concentrates produced at Colquiri between 2007 and 2012 (when the Mine was still being operated by Claimant) was 48.2%, *i.e.*, below Claimant's estimated average grade of 48.75%. Thus, even if all tin concentrates produced by Colquiri had been sold to the Tin Smelter, they could not (by definition) have elevated the average grade of the concentrates processed to 48.75%, *i.e.*, there would not have been enough high grade concentrates to achieve Claimant's expected production rate.

652. Two, it is unclear how the purported increase in the input of concentrates from various sources (which RPA includes as a potential explanation for the poor performance of the Tin Smelter)[1003] would have, in and of itself, lead to a reduction of the average grade of concentrates purchased by the Tin Smelter.

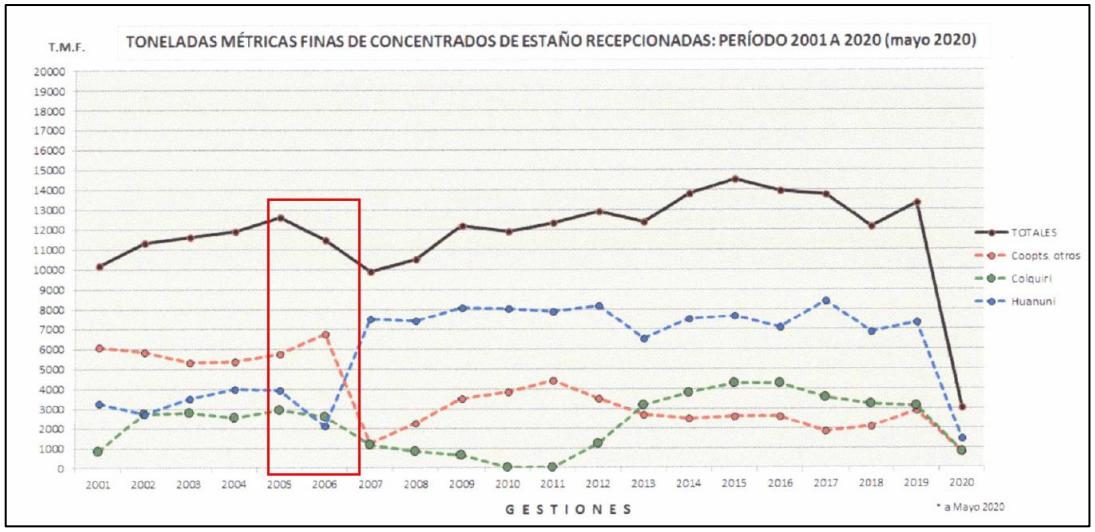
653. Despite bearing the burden to do so, Claimant has not established that such increase in the input of low grade tin concentrates from a variety of sources occurred. In any event, RPA glosses over the fact that the Tin Smelter has always purchased concentrates from multiple suppliers, including during Claimant's operations:[1004]

pdf) and 2006 (Glencore, 2006, Sinchi Wayra S.A. Consolidated Management Report, December 2006 (Extracts), **RPA-34**, p. 14 of the pdf).

1002 RPA II, ¶ 206.

1003 RPA II, ¶ 206.

1004 Empresa Metalúrgica Vinto Evolution of Tonnes of Tin Concentrates Processed 2001-2020, **R-407**.



654. The "*diario de recepción y tratamiento de concentrados*" of 19 September 2005 shows that, on that day, the Tin Smelter – under Glencore's management – purchased concentrates from a natural person (18.99% of the purchases of that day), three different *cooperativas* (32.53% of the purchases of that day), a *comercializadora* (4.82% of the purchases of that day), and from the Huanuni and Colquiri mines (respectively, 24.86% and 18.80% of the purchases of that day).[1005]

655. *Fourth*, arguing that "*Vinto was (and still is) the only commercial scale tin smelter in Bolivia and the natural buyer for all tin concentrate produced in Bolivia*"[1006] is equally unavailing for Claimant.

656. On the one hand, Claimant alleges that there would be sufficient quantities of high-grade concentrates available in Bolivia, and that they would all be available to the Tin Smelter:

> *Vinto had significant bargaining power to acquire volumes of tin concentrate required for its operations because the only other tin smelter in the region was located in Pisco, Peru, and it was typically more cost effective for concentrate producers in Bolivia to sell its concentrate to Vinto than to incur in the cost of shipping concentrate to Peru or to the next closest smelters, which were in Asia.*[1007]

657. There is no reason to believe – and Claimant has marshalled no evidence to support this allegation – that all the high-grade concentrates produced in Bolivia would be readily available to the Tin Smelter, as there is a market for high-grade tin concentrates outside

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1005 Concentrates reception and treatment partial log, GB006714 of 19 September 2005, **R-513**; Documents produced by Claimant for Request 35, **R-514**.

1006 Reply on Quantum, ¶ 129.

1007 Reply on Quantum, footnote 323. See RPA II, ¶ 222; Eskdale III, ¶¶ 27(d), 55.

Bolivia. On Claimant's own case, Glencore International exported most of Colquiri's tin concentrates between 2007 and 2012.[1008]

658. On the other hand, RPA admits that the State-managed Smelter has acquired a higher proportion of low-grade concentrates produced in Bolivia between 2007 and 2017 (even after the reversion of the Colquiri Mine Lease), when it seeks to explain why the average grade of the concentrates purchased by the Tin Smelter has been decreasing.[1009]

659. Assuming *in arguendo* Claimant's position (*i.e.*, that all the tin concentrates produced in Bolivia were "naturally" destined for the Tin Smelter), then the decrease in the grade concentrates purchased by the Tin Smelter demonstrates the overall decline in the average grade of the concentrates produced in the country.[1010]

4.2.4.3 Claimant and its experts estimate an unduly high metallurgical recovery rate at the Tin Smelter

660. The average grade of the processed concentrates and the recovery rate (*i.e.*, how much of the tin present in the concentrates is recovered at the end of the process) are determinative of the Tin Smelter's ingot production. As such, an inflated recovery rate directly impacts the valuation of the Tin Smelter, which is why RPA assumes a constant high metallurgical recovery rate of 95.6%. This is how RPA converts 30,000 tonnes of 48.75% grade tin concentrates into 14,000 tonnes of 99.95% purity tin ingots per year.[1011]

661. RPA bases its 95.6% recovery rate on the 2006 average rate, and states that the estimate would be "*in line with the average metal recoveries at the Tin Smelter during the period of 1997 to 2006 (96.2%)*."[1012] Tellingly, RPA did not compare its forecasts for the other drivers (the production rate, the average grade of concentrates, the price forecasts and costs estimates) with the data from the ten-year period prior to the reversion. It only does so with regard to the recovery rate, as the data conveniently confirms its estimate (whereas it disproves all its other assumptions). RPA also assumes that this recovery rate would remain constant through

1008 RPA II, ¶ 206.

1009 RPA II, ¶ 206 and Table 10.

1010 Empresa Metalúrgica Vinto, Technical Operations Report 007-2019-OP, Final Evaluation of the 2018 Annual Operations Plan, **R-402**; Empresa Metalúrgica Vinto, Report EMV-PP-INF 008/2019, Final Evaluation Report of the 2018 Annual Operations Plan and Executed Budget, **R-403**; Empresa Metalúrgica Vinto, Technical Operations Report 187/2019-OP-IT, Monitoring of the 2019 Annual Operations Plan, **R-404**; Empresa Metalúrgica Vinto, Report EMV-PP-INF 039/2019, Monitoring Report of the 2019 Annual Operations Plan and Executed Budget, January-September, **R-405**; Empresa Metalúrgica Vinto, Technical Operations Report 017/2020-OP-IT, Final Evaluation of the 2019 Annual Operations Plan, **R-406**.

1011 RPA II, ¶ 192-193.

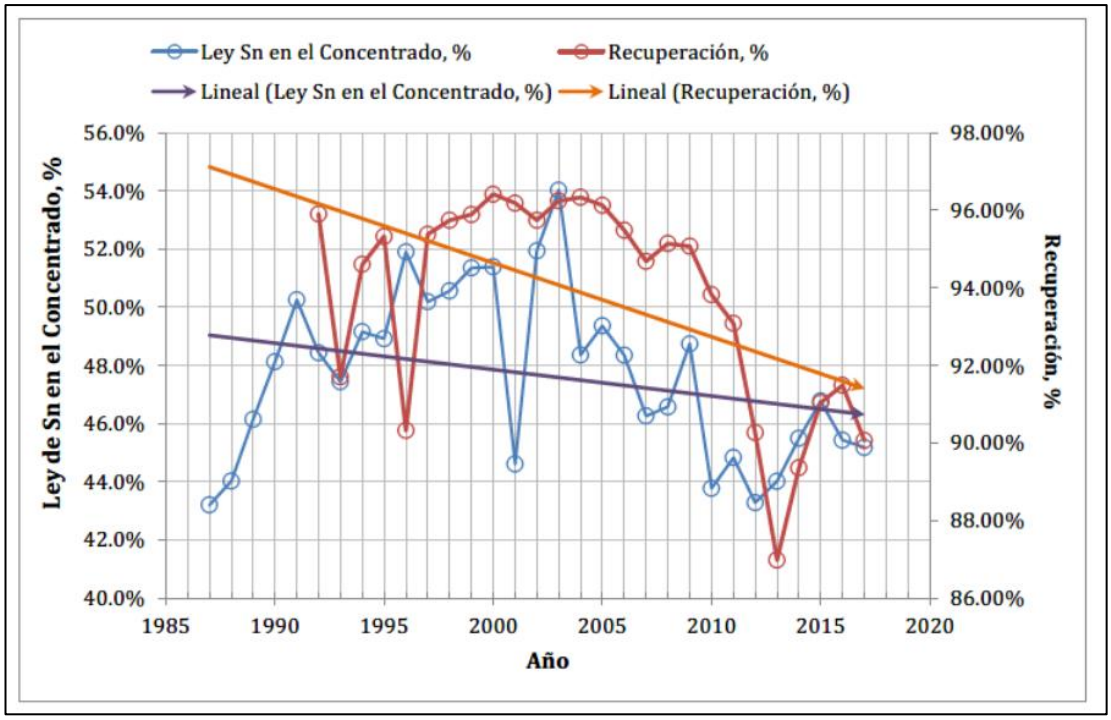
1012 RPA II, ¶ 209.

2026. RPA's estimate is untethered to the reality of tin mining and smelting in Bolivia for, at least, two reasons:

662. *First*, as explained by Eng Villavicencio, the recovery rate is dependent on the grade of the processed concentrates. The higher the quality/purity of the concentrate, the better the recovery rate, and vice versa:

> *En la industria manejamos una regla muy sencilla: a menor ley, menor recuperación. La bajada en la calidad de los concentrados de Huanuni y Colquiri en los últimos 5 años incide en la recuperación metalúrgica, porque el material estañífero tiene que recircular más hasta obtener el grado de exportación, lo que incrementa el circuito (subproductos del proceso de fundición y refinación, tales como escorias ricas, cenizas de hierro, drosses, compuestos intermetálicos etc.).*[1013]

663. Given that the average grade of tin concentrates has historically (and today) been in decline, as explained above, the recovery rate follows the same trend:



664. An earlier version of this chart (with data from 1985 to 2017) was included in Eng Villavicencio's First Witness Statement,[1014] but instead of engaging with it, RPA presented

[1013] Villavicencio III, ¶ 73 (Unofficial translation: "*In the [mining] industry we have a very simple rule: the lower the grade, the lower the recovery. The decrease in the quality of the Huanuni and Colquiri concentrates in the last 5 years has a consequence in the metallurgical recovery, because tin material has to recirculate more until it reaches the exportation grade, which increases the pipeline (subproducts of the smelting and refining process, such as slag, rich dross, iron ashes, intermetallic compounds, etc.)*")

[1014] Villavicencio I, ¶ 70.

another chart depicting only the recovery rates from 1997 to 2017 in order to truncate the true reason behind evolution of the recovery rate:[1015]

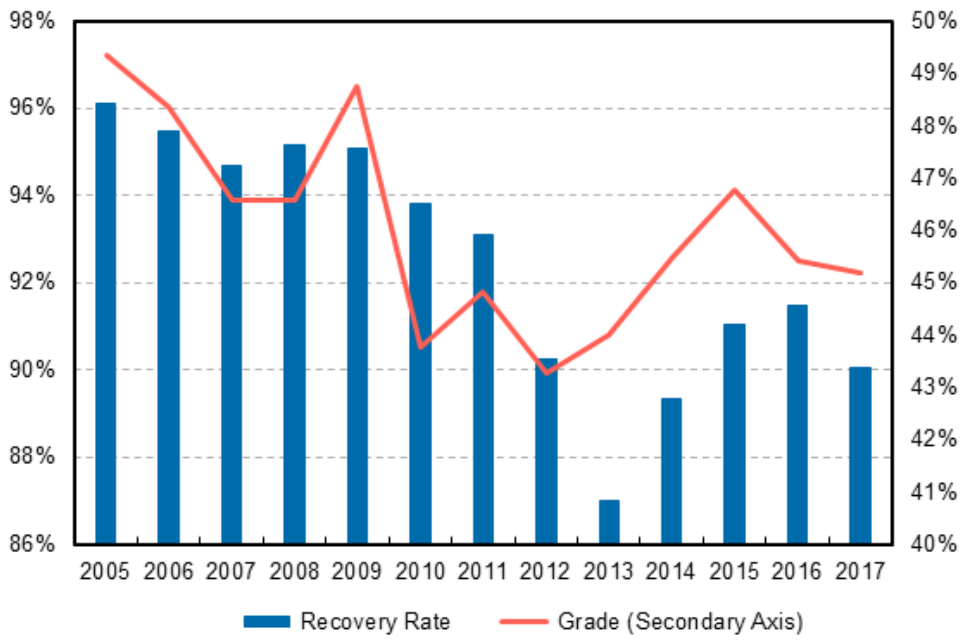


Figure based on RPA II's Figure 10 (depicting recovery rates in blue), but including the average concentrate grade (in orange)

665. *Second*, instead of recognizing that the lower recovery rates post-reversion are directly caused by the lower-grade concentrates being processed, RPA speculates that Bolivia may have failed to perform the production units' required maintenance or somehow not operated the Tin Smelter properly.[1016] This is not only unsupported, but belied by *ex post* data.

666. RPA fails to consider that, after 2011, the Tin Smelter had to begin processing larger quantities of lower-grade concentrates because of the lack of high-grade concentrates in the country – and this only to maintain production (until 2015, when production increased due to the commissioning of the Ausmelt furnace).[1017] The processing of lower-grade concentrates explains the lower recovery rates in 2010-2017.

667. The recovery rates remained below 92% even after 2015 (when the smelting process moved to a state-of-the-art furnace and despite the increase in both the processing capacity and

[1015] RPA II, Figure 10.

[1016] RPA II, ¶ 214.

[1017] Villavicencio I, ¶ 55.

production rates[1018]), further confirming that the decline in the recovery rates is unrelated to the conditions or technology of the furnaces.

668. Finally, Claimant's suggestion that Bolivia would not have properly operated the Tin Smelter is equally unavailing, as the same personnel that worked at the Smelter under Claimant continued to operate the Smelter after the reversion: Eng Villavicencio, for example, started working at the Tin Smelter before its privatization, continued to work there under Comsur's and Glencore's management and then after Bolivia had again assumed the Smelter's operations.[1019]

4.2.4.4 Compass Lexecon's tin sale price forecasts are unduly high

669. Claimant's estimated revenues for the Tin Smelter are further inflated through Compass Lexecon's unduly high price premium of 3% for all tin ingots sale contracts, which results in adding between US$ 203 to US$ 289 per tonne to the ingot sales prices. Compass Lexecon ignores all historical data and bases its sales premium on a single contract executed by the Tin Smelter and the Brazilian company Soft Metais in 2006 for the supply of just 14 tonnes of tin ingots (*i.e.*, 0.12% of the 11,403 tonnes of ingots produced that year). Compass Lexecon's tin sale price forecasts are unreasonable for, at least, two reasons:

670. *First*, as explained in Bolivia's Statement of Defence and by Dr Flores of Quadrant,[1020] a price premium established in one contract is not representative of overall tin ingot sales and cannot be used as a reliable estimate in the Tin Smelter's valuation. A single contract does not provide a sufficiently reliable basis to project premia for the following 20 years until 2026.[1021] This is further confirmed by, at least, three facts:

671. One, Glencore acknowledged in 2004, during its due diligence, that premia were "*quite fixed*" and that a 3% premium was an exception only for the Brazil sales (*i.e.*, the only contract used by Compass Lexecon):[1022]

> Premiums : quite fixed 80 to 115 USD / T , only the Brasil sales have a 3 % on LME price premium .

[1018] The Tin Smelter processed 29,337 DMT of concentrate and produced 12,102 tonnes of ingots in 2015 (Vinto Production Metallurgical Balance 2015, **R-65**, p. 1). After a slight increase in 2016, these numbers decreased in 2017 due to the continuous decline in the average grade of concentrates.

[1019] Villavicencio I, ¶¶ 6-8.

[1020] Statement of Defence, ¶ 866; Econ One, ¶¶ 117-120.

[1021] Statement of Defence, ¶ 866.

[1022] Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**, p. 7.; Vinto SA-Soft Metals Ltda - Purchase Contract 03 - 20.02.06, **CLEX-32**, p. 1.

672. Two, Glencore International's own short-term purchase contracts executed with the Tin Smelter shortly after the reversion[1023] provided for premia of US$ 120,[1024] US$ 75,[1025] US$ 35[1026] and US$ 146 per tonne of tin ingots[1027] (far from the US$ 203 to US$ 289 considered by Compass Lexecon).[1028]

673. Three, Glencore offered to purchase tin ingots from the Tin Smelter without a premium[1029] on 19 September 2017.

674. *Second*, although Claimant attempts to justify its high premium with purported "*third-party market reports*,"[1030] the 2007 report by CRU Tin Monitor[1031] cited by Compass Lexecon as evidence that tin "*stocks were expected to draw down steadily if there was no real progress on the supply side*"[1032] does not support Claimant's or Compass Lexecon's position. As Quadrant explains, "*the full paragraph from which Compass Lexecon quotes reveals that the report does not suggest with any confidence that supply shortages should be expected*."[1033]

675. Conversely, in establishing its price estimates, Quadrant has relied on all contracts for the sale of tin ingots executed by the Tin Smelter between 2002 and 2006, including the 2006 contract that serves as a basis for Claimant's estimate.[1034] Claimant submitted 23 sales contracts with its Statement of Claim. Of these 23 contracts, 18 were for the sale of 99.9% tin ingots and all of them were used in Quadrant's estimate.[1035]

676. In the Reply, Claimant and Compass Lexecon misrepresent Dr Flores' projected premium by stating it would be based on contracts "*that expired well before the valuation date*."[1036] In fact, Dr Flores/Quadrant bases its 1.68% premium on the average premium across all contracts signed in the 4-year period before the valuation date. Claimant's generic statement only

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1023 Econ One, ¶ 117.

1024 Purchase Agreement for Metallic Tin between Glencore International and EMV of 19 July 2007, **R-79**

1025 Purchase Agreement for Metallic Tin between Glencore International and EMV of 17 September 2007, **R-80**.

1026 Purchase Agreement for Metallic Tin between Glencore International and EMV of 18 October 2007, **R-81**.

1027 Purchase Agreement for Metallic Tin between Glencore International and EMV of 12 November 2008, **R-82**.

1028 Compass Lexecon Updated Vinto Valuation, **CLEX-41**, tab "Margin.", row 18.

1029 Purchase offer for 200 TMN of Metallic Tin from Glencore of 19 September 2017, **R-83**; Villavicencio I, ¶ 87, Econ One, ¶ 118.

1030 Reply on Quantum, ¶ 140.

1031 CRU Monitor-Tin, February 2007, **CLEX-17**.

1032 Compass Lexecon II, footnote 131.

1033 Quadrant II, footnote 222.

1034 Quadrant II, ¶ 112; Econ One, ¶ 117.

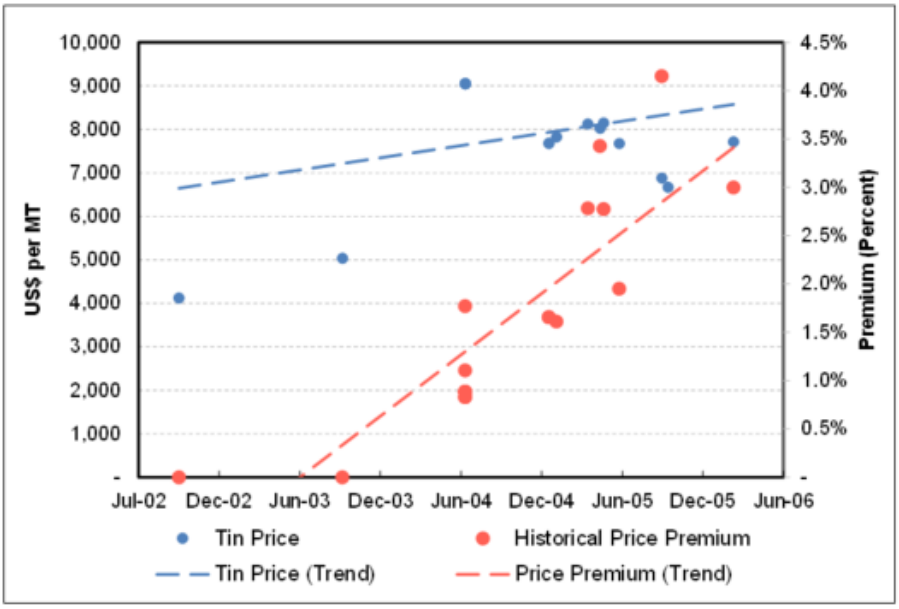
1035 Econ One, ¶ 117.

1036 Reply on Quantum, ¶ 140; Compass Lexecon II, ¶ 68.

attempts to discredit Dr Flores' projections to masquerade the flagrant unreasonableness of its own proposed premium.

677. Compass Lexecon attempts to further discredit Dr Flores' approach by asserting that price premia would have been trending upward prior to the valuation date, and that using the average premium of contracts over time would not account for the most current market expectations.[1037] Compass Lexecon, however, ignores the dynamics of tin market prices and premiums, "*[a]s tin prices increase or decrease, so do the premiums*,"[1038] as shown in Quadrant's graph below:[1039]

Figure 14
Historical Tin Prices and Price Premiums[220]



678. As Compass Lexecon recognizes, as of February 2007, tin prices were expected to fall in real terms.[1040] Quadrant concludes that "*given the relationship between tin prices and premiums and the expectation of falling future tin prices as of the Vinto Valuation Date, it is reasonable to expect a premium lower than the 3% Compass Lexecon assumes, based on a single contract*."[1041] Quadrant, therefore, maintains its premia estimate at 1.68%.[1042]

1037 Compass Lexecon II, ¶ 69.

1038 Quadrant II, ¶ 114.

1039 Quadrant II, Figure 14.

1040 Compass Lexecon Price Forecasts, **CLEX-30** Compass Lexecon Price Forecasts, tab "Summary", rows 13-14.

1041 Quadrant II, ¶ 116.

1042 Quadrant II, ¶ 116.

4.2.4.5 Compass Lexecon underestimates necessary capital investments and operating expenses

679. Despite the demonstration by Bolivia in its Statement of Defence[1043] and by Dr Flores,[1044] Compass Lexecon continues to ignore significant costs in its model, including the necessary investment and costs to support its 21.8% projected increase in production. In addition, RPA adjusts the Tin Smelter's expenses downwards due to alleged economies of scale, expecting that the total costs per tonne of concentrate processed would decrease to US$ 315.3 by 2008.[1045] Compass Lexecon follows suit, and although it has slightly increased its initial estimate for smelting, quality control, maintenance and other indirect expenses to US$ 9.4 million in its Second Report,[1046] it maintains its estimates of US$ 300,000 for general and administrative ("**G&A**") expenses and US$ 800,000 for sustaining capital expenditures annually.[1047]

680. As explained in the Statement of Defence,[1048] Compass Lexecon's model underestimates the Tin Smelter's necessary capital investments ("**CAPEX**") (**a**) and operating costs ("**OPEX**") (**b**) required for its extraordinary increase in production:

a) Claimant continues to ignore the CAPEX needed to achieve its projected production

681. Claimant bases its CAPEX estimate in the (very limited) historical data from the two years Claimant operated the Tin Smelter at maximum capacity producing 11,401 and 11,403 tonnes of ingots per year in 2005 and 2006, respectively. This is unreasonable for the following reasons:

682. *First*, Compass Lexecon underestimates the CAPEX investment required to achieve a 21.8% surge in production starting in 2008. As of February 2007, given that Claimant had made minimum sustaining capital expenditures between March 2005 and February 2007, the Tin Smelter's main production units were operating at maximum capacity and in urgent need of refurbishment to maintain the production at about 11,000 tonnes of ingots per year (let alone to increase production to 14,000 tonnes of ingots per year, as projected by Claimant).

683. One, while Claimant insists that the "*optimization processes*" carried out between 2002 and 2006 (described in RPA-53 and Annex II of RPA's Second Report) would enable the increase

1043 Statement of Defence, ¶¶ 868-876.

1044 Econ One, ¶¶ 109-111.

1045 RPA II, Section 3.1.4.; 2020 RPA Model, January, 2020, **RPA-55 Bis**, tab "Vinto Tin Smelter", rows 71, 72, 73 and 74.

1046 Compass Lexecon II, Table 7.

1047 Compass Lexecon II, ¶¶ 71, 73.

1048 Statement of Defence, ¶¶ 870-876.

in the production rate,[1049] Bolivia has already demonstrated that these projects were not intended and could not increase the Tin Smelter's production capacity as they were mostly industrial security improvements and routine maintenance projects to avoid production losses, as explained in Section 4.2.4.1 above.

684. In the document production phase, Bolivia requested documents "*refer[ing] to the repair of any of the Tin Smelter's Productive Units*".[1050] In response, Claimant produced a single document[1051] that describes the same processes referred to in RPA-53. Indeed, Claimant cannot distinguish between these optimization processes and the furnaces' regular maintenance repairs.

685. Two, RPA and Compass Lexecon also assume that the Tin Smelter could already process 30,000 DMT of concentrate as of 2007, basing this assumption in the processing rates as of 2014.[1052] As explained above, processing capacity and production capacity are not the same concept. In fact, the increase in the concentrate feed between 2012 and 2014 did not result in an increase in production, which remained at 11,358 tonnes of ingots in 2012, 11,401 tonnes of ingots in 2013 and 11,805 tonnes of ingots in 2014[1053] (thus it cannot support Claimant's projected rates). Moreover, it was achieved thanks to a US$ 1 million investment to repurpose one of the Antimony Smelter's furnaces to process low-grade tin concentrates,[1054] an investment that is not considered in Claimant's model.

686. Three, Claimant dismisses Bolivia's US$ 39 million investment in the Ausmelt furnace as unnecessary, alleging that it had considered acquiring the furnace, but concluded that "*it was not necessary to achieve its objectives for Vinto*."[1055] Claimant ignores, as explained above, the reality of the tin market in Bolivia, and the fact that there were not (and still are not) sufficient high-grade concentrates available for purchase to achieve its projected production rates of 14,000 tonnes of ingots per year. The Ausmelt furnace became indispensable to the new reality of the market, allowing Bolivia to process a larger amount of low-grade concentrates efficiently so as to maintain the production levels between 11,000 and 12,000 tonnes of ingots per year, while also ensuring that the operation remained financially

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1049 Reply on Quantum, ¶ 135.

1050 Annex 2 to Procedural Order No. 9 of 30 September 2019, Bolivia's Request No. 31; Document produced by Claimant for Request 31, **R-515**.

1051 Summary of the Projects and Works Executed in Vinto, Report, GB006778, **R-516**.

1052 RPA II, ¶¶ 219-230; Compass Lexecon II, ¶ 73.

1053 Empresa Metalúrgica Vinto Production History 1995-2019, **R-401**.

1054 See Section 4.2.4.1 above.

1055 Reply on Quantum, ¶ 136.

sustainable.[1056] Even with a US$ 39 million investment in the Ausmelt, the Tin Smelter still has not reached Claimant's projected production of 14,000 tonnes of ingots per year,[1057] which confirms how unreasonable Claimant's projections are.

687. As *ex post* data does not support its CAPEX estimate, Claimant ignores it, in stark contrast with its reliance on *ex post* data for other inputs in the model (*e.g.*, processing capacity).

688. *Second*, Claimant dismisses Eng Villavicencio's statement that US$ 800,000 as sustaining capital would be insufficient to maintain the 2005-2006 production levels (much less increase it), alleging it would be unsupported.[1058] Yet, Eng Villavicencio has detailed the expenses that would be necessary to maintain production levels around 11,000 tonnes of ingots per year. In 2008 alone, Bolivia invested US$ 1 million in the maintenance of reverberatory furnaces 3 and 4 for the Tin Smelter to reach 11,000 tonnes of ingots per year again, after a drop of some 2,000 tonnes of ingots in 2008.[1059]

689. Furthermore, in its Second Report, Quadrant explains that an increase in the Smelter's processing capacity cannot be reached with sustaining CAPEX alone, as Claimant asserts. Had Compass Lexecon included the real level of CAPEX needed for the Tin Smelter to increase processing capacity (which would not, in any event, lead to an increase in production, as demonstrated above), its valuation of the Tin Smelter would decrease by 31.2% (US$ 17.5 million).[1060]

690. *Third*, Claimant's assumptions for CAPEX is at odds with its own contemporaneous plans for the Tin Smelter. The December 2006 Vinto Report submitted by Claimant shows that Glencore had planned to invest US$ 1.1 million in "*major projects*" during that year, but only invested about US$ 7,000.[1061] The January 2007 Sinchi Wayra Management Report (obtained in full through disclosure) shows that Glencore identified the need for US$ 2.3 million in "*major projects*" for that year in addition to (and more than double than) the regularly forecasted CAPEX.[1062] The list of projects for 2007 includes projects that, as Eng Villavicencio explains, were not executed in 2006, such as "*rehabilitación horno volatizador*

1056 Villavicencio III, ¶ 59.

1057 Villavicencio III, ¶ 61.

1058 Reply on Quantum, ¶ 134.

1059 Villavicencio III, ¶ 52; Production history of the Empresa Metalúrgica Vinto 1995-2017, **R-78**; Documents produced by Claimant for Request 34, **R-517**.

1060 Quadrant II, ¶ 99.

1061 Complejo Metalúrgico Vinto S.A., 2006, Vinto S.A. December 2006 Report (Extracts), **RPA-21**, p. 9.

1062 Sinchi Wayra S.A. Management Report of January 2007, GB009289, **R-518**, p. 84.

3" and work on the *"locomotoras*", and others were either similar or in addition to the projects that were not carried out in 2006.[1063]

b) Claimant continues to underestimate the OPEX needed to maintain operations

691. Claimant's OPEX forecasts are equally underestimated.

692. *First,* despite Bolivia's demonstration that Claimant's purported economies of scale were unsupported and, in fact, inexistent,[1064] Claimant insists that the Tin Smelter's 2006 OPEX should be adjusted downwards "*to account for the economies of scale that Vinto would have gained as production increased between 2006 and 2008*."[1065]

693. Leaving aside the fact that no such increase in production could have occurred, Compass Lexecon is still at a loss to provide any evidence that the Tin Smelter would have benefited from cost reductions due to the projected production increase. Compass Lexecon's application of economies of scale in determining the Smelter's OPEX remains speculative, at best.

694. Although it is Claimant's burden to establish the existence and magnitude of any purported economies of scale, Quadrant shows, on the basis of the 2006 operating data submitted by RPA, that OPEX actually increased due to the surge in the quantities of concentrates processed (*i.e.*, the opposite of Claimant's assumption):

> *Table 11 from the First RPA Report shows that "Tonnes treated (dmt)" increases between 2005 and 2006, while unit costs also increase from US$ 305.97 per ton to US$ 368.79 per ton. I note that <u>these numbers actually indicate deteriorating efficiency</u>, counter to Compass Lexecon's assumption of future economies of scale.*[1066]

695. Moreover, (i) the poor condition of the Tin Smelter's available productive units; (ii) the reduction of the average grade of concentrates produced in Bolivia; and (iii) Claimant's failure to invest in the Tin Smelter mean that economies of scale would not have occurred anyway.

696. Finally, even if an increased concentrate feed could lead to economies of scale, Compass Lexecon ignores other factors that would drive the OPEX costs per unit up. The lower average concentrate grade increases the costs per unit of recovered tin as, for a fixed amount of processed concentrates, less metal is recovered and thus there are less tin ingots against which

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1063 Quadrant II, ¶ 96 (Unofficial translation: "*rehabilitation fuming furnace 3*," "*locomotives*"); Villavicencio III, ¶¶ 78-79.

1064 Statement of Defence, ¶ 874; Econ One, ¶ 110.

1065 Reply on Quantum, ¶ 137.

1066 Quadrant II, footnote 202 (emphasis added).

to disburse the operating costs.[1067] Lower concentrate grades also increase environmental costs and impurity levels, which drive up costs and further indicate that Claimant's unsubstantiated allegations regarding economies of scale are implausible.[1068]

697. *Second*, RPA assumes that 90% of the OPEX would be fixed and only 10% would vary with the amount of tin concentrate processed by the Tin Smelter.[1069] Claimant criticized Dr Flores' position that OPEX are fluctuating rather than fixed costs as being "*contrary to the facts and all relevant economics literature*".[1070] Claimant's criticism is unwarranted for four reasons:

698. One, RPA does not provide any evidence that the Tin Smelter's operating costs would be comprised of 90% fixed costs and 10% variable costs.[1071] It is Claimant's burden to establish this purported break down.

699. Two, neither Claimant nor its experts identify which "*facts*" Dr Flores' analysis would have allegedly contradicted. No such contradiction exists, in fact.

700. Three, OPEX includes variable costs. Quadrant clarifies that "*[t]here are fixed components to OPEX, but there is no clear evidence that the Vinto operation was achieving economies of scale, and neither RPA nor Compass Lexecon has presented data to justify a specific breakdown between fixed and variable components*."[1072]

701. Four, Quadrant clarifies that "*[t]he reality is that OPEX generally increases when production increases – that is, it includes variable costs*."[1073] This also runs counter to Claimant's estimated economies of scale, which depend on the alleged breakdown of 90% fixed costs and 10% variable costs.

702. *Third,* Compass Lexecon continues to estimate the tin concentrate purchase costs based on a single contract between Colquiri and the Tin Smelter in 2007, stating that it would be the latest contract available,[1074] which is clearly insufficient.

703. On the one hand, neither Claimant nor Compass Lexecon have addressed Dr Flores' criticism that Claimant's assumed tin concentrate purchase price estimate is based on a single

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1067 SRK II, Section 5.5.

1068 SRK II, Section 5.5.

1069 RPA II, ¶ 225.

1070 Reply on Quantum, ¶ 138.

1071 Quadrant II, ¶¶ 105-106. There is no support for RPA's allegations. RPA II, ¶ 225.

1072 Quadrant II, ¶ 106.

1073 Quadrant II, ¶ 106.

1074 Compass Lexecon II, ¶68.

contract.[1075] As explained with regard to the projected tin ingot sale price, it is unreasonable to project prices (whether for purchase or for sale) for the upcoming 20 years based on a single contract.[1076]

704. On the other hand, Colquiri was not the Tin Smelter's main supplier of concentrates. As discussed above, Colquiri's tin concentrate production levels fluctuated between 2,000 and 7,000 DMT between 2005 and 2012 (*i.e.*, it would have achieved at most 24% of the Tin Smelter's needs), and would never be able to provide enough concentrates for the Smelter's feed.[1077] As Bolivia explained, at the time of the reversion, Huanuni was the Tin Smelter's main supplier.[1078]

705. *Fourth*, Compass Lexecon criticized Quadrant's G&A cost estimates, stating that they are based on 15 months of expenses (instead of 12 months) and that they include non-G&A expenses.[1079]

706. One, Quadrant clarifies that the December 2005 Vinto Management Report[1080] states that the data is year-to-date (YTD), which is usually understood as referring to a year, *i.e.*, 12 months. However, it is also true that a different document with excerpts of the same report states that the report covers 15 months of operations.[1081]

707. Two, Compass Lexecon's comment concerning the inclusion of non-G&A expenses is misguided. Compass Lexecon argues that the line "G&A" in the December 2005 Management Report should be the only one considered in the calculations, thus excluding the line for "Other Income/ (expenses)" also considered by Quadrant. But as Quadrant explains:

> *However, the December 2006 Vinto Management Report, from which Compass Lexecon takes the line item for "Other Income / (expenses)" of US$ 264,395 for its G&A expenses, also contains a specific line item for "General & Administrative expenses" of US$ 513,000.*[1082]

1075 Econ One, ¶¶ 115-117.

1076 Econ One, ¶¶ 113-115.

1077 See Section 4.2.4.2 above.

1078 Statement of Defence, ¶ 875; Econ One, ¶ 115; SRK I, ¶ 98.

1079 Compass Lexecon II, ¶ 71.

1080 Vinto S.A. - December 2005, **CLEX-11-1**.

1081 Vinto S.A. - Monthly Report December - 2005, **CLEX-11-2**, p. 2 of the pdf.

1082 Quadrant II, ¶ 111; Compass Lexecon I, ¶ 85, footnote 103; Vinto S.A. - December 2006, **CLEX-11-3**, pp. 5, 21 of the pdf; Documents produced by Claimant for Request 33, **R-519**.

708. Since those US$ 513,000 constitute G&A expenses (and Claimant has not demonstrated otherwise), Quadrant has updated Compass Lexecon's model accordingly, reducing damages calculation by US$ 1 million.[1083]

709. *Fifth*, Compass Lexecon fails to account for remediation and closure costs for the Tin Smelter, even though it does so for its valuation of the Mine Lease. It should be undisputed that there is contamination at the Tin Smelter, as Glencore itself recognized in its due diligence for the Tin Smelter "*there is a significant soil pollution which affect a large cercle around the plant, the soil pollution is significative till 1 km from the roaster plant and is noticeable till 2.5 km.*"[1084] SRK has estimated that remediation costs for Vinto would exceed US$ 20 million, which, as explained by Quadrant, should reduce Compass Lexecon's valuation by further US$ 1 million (as Quadrant recognizes this cost in 2026).[1085]

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710. Claimant's cherry-picking approach to each valuation driver (considering *ex ante* or *ex post* data according to what leads to the highest possible forecasts) with the clear goal of inflating the Tin Smelter's valuation should be rejected outright.

4.3 Ms Russo's Second Expert Report Confirms That Claimant's Valuation Of The Antimony Smelter Is Methodologically Flawed and Still Grossly Inflated

711. In her Second Expert Report, Ms Russo values the Land (87,496.40m^2 of land earmarked for industrial use in the outskirts of Oruro) and the buildings of the Antimony Smelter at an astonishing US$ 2,962,628.10 and US$ 485,660, respectively, as at 22 January 2020.[1086] Based on Ms Russo's updated valuation, Compass Lexecon quantifies Claimant's damages for the Antimony Smelter at US$ 1.9 million (after income and remittance taxes).[1087] Contrary to what Claimant avows, this valuation is far from "*reasonable*."[1088]

712. [redacted]

1083 Quadrant II, ¶ 111.

1084 SRK II, Section 5.7.

1085 Quadrant II, ¶ 121.

1086 Russo II, Table 9.

1087 Compass Lexecon II, ¶ 143.

1088 Reply on Quantum, Section III.B.2.

[redacted]

Surprisingly, however, Claimant seeks damages of US$ 1.9 million in relation to the Antimony Smelter *only*. This highlights the abusive nature of Claimant's claims.

713. The Parties agree that the Antimony Smelter should be valued through an asset-based methodology, but disagree as to the date of valuation and the applicability of the comparable transaction method in the circumstances.[1089] In accordance with the Treaty, the Antimony Smelter should be valued *ex ante* as at 30 April 2010 (not *ex post* as at 2020) and has not, in any event, appreciated in value since the reversion in 2010. Hence, Ms Russo's updated *ex post* valuation of the Antimony Smelter should be rejected outright (**Section 4.3.1**). Moreover, Ms Russo's valuation remains methodologically flawed and grossly inflated. The fact that, in her Second Report and after having finally conducted a site visit of the Antimony Smelter, Ms Russo accepts Architect Mirones' valuation of the buildings as at 2010 confirms that her initial valuation of the abandoned and deteriorated buildings of the Antimony Smelter was flawed and exaggerated (**Section 4.3.2**). In addition, Ms Russo's valuation of the Land continues to also be methodologically flawed, speculative and grossly inflated as she relies on so-called "comparables", which are in no way comparable to the Land's unique characteristics, as confirmed by the documents submitted by Ms Russo in her Second Report (**Section 4.3.3**). Therefore, Architect Mirones' valuation is the only methodologically sound and realistic valuation of the Antimony Smelter (**Section 4.3.4**).

4.3.1 The Antimony Smelter Should Be Valued *Ex Ante* As At 30 April 2010

714. In its Reply on Quantum, Claimant argues that the Antimony Smelter should be valued as at the date closest to the Award, as it would have "*appreciated in value since Bolivia nationalized it on 1 May 2010 […] at least in part because it is located outside of a city (named Oruro) that had grown over the last decade causing land values in the city and surrounding areas to increase*."[1090] This is both wrong on the law and on the facts:

715. *First*, as explained in Section 2.2.2 above, Claimant's "*higher of*" approach to claiming damages should be rejected outright because it is contrary to international law.

716. One, the alleged expropriation of the Antimony Smelter was not unlawful, but instead '*provisionally lawful*', since Claimant only complains of not having received

[1089] Reply on Quantum, ¶ 157; Statement of Defence, Section 7.3.6.

[1090] Reply on Quantum, ¶ 159.

compensation.[1091] Accordingly, Article 5(1) of the Treaty must apply to the valuation of any compensation due, which provides that "*[…] compensation shall amount to the market value of the investment expropriated immediately before the expropriation*,"[1092] *i.e.*, a valuation *ex ante*. This constitutes, per the will of the parties to the Treaty, the standard applicable to lawful, '*provisionally lawful*' and unlawful expropriations, and Claimant has offered no reason for the Tribunal to disregard this.[1093] Moreover, unlike the valuation date established in the Treaty, the date of the award has no connection to the breach and loss suffered. Consequently, the Antimony Smelter should be valued as at 30 April 2010 (*i.e.*, the day immediately before it reverted to the State, by virtue of the 1 May 2010 Antimony Reversion Decree[1094]).

717. Two, even if the customary international law principle of full reparation were applicable for the valuation of the Antimony Smelter (*quod non*), the Tribunal should arrive at the same result as by applying the Treaty.

718. Under international law, the principle is "compensation", which is equivalent to restitution in kind. Any additional damages would be punitive and lead to unjust enrichment for Claimant (both of which are prohibited under international law). Put differently, full reparation under customary international law would not allow for the awarding of any damages higher than those under the Treaty's compensatory standard as any such higher damages would essentially be "punishing" the State because an expropriation was unlawful.

719. Three, Claimant cannot simply choose whichever date it considers to be more profitable as a valuation date for the Antimony Smelter. International law simply does not recognize a "*higher of*" approach to damages. As explained detail in in Section 2.2.2 above, neither *Chorzów* nor the vast majority of arbitral jurisprudence entitles Claimant to freely pick and choose the time at which it would be most profitable to value its investment.

720. Second and in any event, Claimant's *ex post* valuation theory based on the alleged appreciation of the Antimony Smelter is belied by the facts. While Claimant's theory that real estate appreciated in value may be true for residential areas generally in the city of Oruro, it is incorrect with respect to the Antimony Smelter.

1091 See Sections 2.1, 2.2.2 above; Statement of Defence, Section 7.3.2.2.

1092 Treaty, **C-1**, Article 5(1) (emphasis added).

1093 See Sections 2.1, 2.2.2 above; Statement of Defence, ¶¶ 719, 723.

1094 Supreme Decree No 499 of 1 May 2010, **C-26**.

721. Ms Russo ignores the location and characteristics of the Land of the Antimony Smelter, which is a major flaw for a real estate valuation. Indeed, the Antimony Smelter is located between zones 5 and 6 in the outskirts of Oruro, *i.e.*, within an industrial (not residential) area.[1095]

722. In the past decades, however, the city of Oruro has grown towards the periphery where industrial plants, such as the Antimony Smelter are located, as can be seen in the following satellite image:

Google Maps view of the Antimony Smelter (in red) and surrounding areas as of June 2020

723. Contrary to Claimant's allegation, the Land's proximity to residential areas prevents any appreciation of the Land's value. Indeed, Oruro has seen blockades and protests by residents against industrial activity as a source of contamination affecting the city.[1096] In response to these protests and complaints by residents, on 31 October 2016, the Municipality of Oruro

[1095] Mirones I, ¶ 41; Urban Cadastre Report of 15 November 2017, **DM-4**; Urban Cadastre Report of 6 December 2017, **DM-5**.

[1096] El Sajama, *Levanten el bloqueo del camino en la zona de Vinto*, press article of 20 April 2016, **R-520**; El Diario, *Vecinos levantan bloqueo del camino Oruro-Potosi*, press article, **R-521**.

issued Municipal Decree No. 58 thereby prohibiting the establishment of new industries in the Vinto area.[1097]

724. More generally, since 2014, the *Ley Nº 535 de Minería y Metalurgia* (the "**2014 Bolivian Mining Law**") has also prohibited the establishment of new smelting activity (and, more largely, any mining activity) within city limits and within 100 meters of roads:

> *no se podrán realizar actividades mineras de prospección terrestre, exploración o explotación, concentración, refinación y fundición: a) Dentro de ciudades, poblaciones, cementerios y construcciones públicas o privadas. b) En la proximidad de carreteras, canales, ductos, vías férreas, líneas de transmisión de energía y comunicaciones, hasta los cien (100) metros.*[1098]

725. Any willing buyer would have seen that, as a result of public opposition and regulations, the Land today cannot serve an industrial purpose going forward (as both the 2014 Bolivian Mining Law and municipal ordinances prohibit new industrial activities in the Vinto area). As explained by Eng Villavicencio in his First Witness Statement:

> *tenemos dos ejemplos de terrenos de las fundidoras Metabol y Operaciones Metalúrgicas S.A. (OMSA) de plomo y estaño, respectivamente, en Oruro que cerraron en los años 90 y que hoy, lejos de haber sido urbanizados, han quedado vacantes. Y esto pese a que están <u>dentro</u> del radio urbano, en la zona sur de Oruro (mientras que la Fundidora de Antimonio está a las afueras). Aunque los alrededores de dichas fundidoras sí han visto un gran crecimiento urbanístico, sus terrenos no han sido edificados.*[1099]

726. Thus, given that the Land is earmarked as industrial, it could not have appreciated in value after 2010.

727. Furthermore, Claimant's suggestion that the buildings of the Antimony Smelter could have appreciated with inflation when they are in shambles is also ludicrous. In his First Witness Statement, Eng Villavicencio explained that "*(salvo por aquellas que nosotros hemos rehabilitado desde 2010 para auxiliar las actividades de fundición de estaño de Vinto) [the buildings and structures of the Antimony Smelter] no tienen ninguna utilidad, y deben ser*

1097 Oruro Municipal Decree No. 058 of 31 October 2016, **R-440**, Article 1.

1098 Law No. 535 of Mining and Metallurgy of 28 May 2014, **R-441**, Article 93 (Unofficial translation: "*mining activities of land prospecting, exploration or exploitation, concentration, refining and smelting may not be carried out: a) Within cities, towns, cemeteries and public or private constructions. b) In the proximity of up to one hundred (100) meters of roads, canals, ducts, railways, energy transmission and communication lines*").

1099 Villavicencio I, ¶ 104 (Unofficial translation: "*we have two examples of the land from the Metabol and Operaciones Metalúrgicas S.A. (OMSA) lead and tin smelters, respectively, in Oruro, which closed during the 90s and today, far from being developable areas, have remained vacant. This, despite the fact that they are located <u>inside</u> the urban area, in the south of Oruro (while the Antimony Smelter is located in the outskirts). Although the areas surrounding those smelters have been experience important urban growth, the land has not been developed*") (emphasis in the original).

desmanteladas y demolidas".[1100] As such, the abandoned buildings of the Antimony Smelter are actually a liability, as further explained below.

728. Claimant's theory that the Antimony Smelter appreciated in value since the reversion in 2010 should, thus, be rejected.

4.3.2 By Accepting Architect Mirones' Buildings' Valuation In Her Second Expert Report, Ms Russo Acknowledges That Her Initial Valuation Was Flawed, Speculative and Grossly Inflated

729. In her First Expert Report, Ms Russo valued the buildings of the Antimony Smelter at an extraordinary US$ 756,658.66[1101] based only on satellite images[1102] (*i.e.*, without conducting a site visit) and assuming they were all concrete structures with concrete foundations and in good condition (which they were not either in 2010 or today).

730. Conversely, in his First Expert Report and after having conducted two site visits of the Antimony Smelter and interviewed EMV personnel, Architect Mirones described and photographically reported[1103] the buildings at the Antimony Smelter as being precarious wooden or brick structures in an advanced state of deterioration and abandonment. This was consistent with a notarized inventory of the Antimony Smelter conducted in May 2010, following the asset's reversion to the State.[1104] Accordingly, Architect Mirones concluded the buildings had a residual value of, at most, US$ 370,405.69 as at 30 April 2010.[1105]

731. In its Reply on Quantum, Claimant states that on its instruction "*and in an attempt to narrow the issues to be decided by this Tribunal, Ms Russo adopted Mr Mirones' value for the buildings in her Second Expert Report. Ms Russo then updated this value to the date of this Reply on Quantum (22 January 2020) by applying the inflation rate for Bolivia's construction sector published by Bolivia's National Institute for Statistics (Instituto Nacional de Estadísticas del Estado Plurinacional de Bolivia) (INE), which was 31% between 2010 and 2019.*"[1106] As a result, in her Second Expert Report, Ms Russo accepts Architect Mirones' value of the buildings as at 30 April 2010, but proceeds to update it as at 22 January 2020 at

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1100 Villavicencio I, ¶ 117 (Unofficial translation: "*the buildings (except for those that we rehabilitated since 2010 to assist Vinto's tin smelting) do not have any use and must be dismantled and demolished*.").

1101 Russo I, Tables 1 and 20.

1102 Russo I, ¶ 4.8.

1103 Photographic report of the Antimony Smelter site inspections of 27 November and 1 December 2017, **DM-7**.

1104 Notarized Inventory of the Antimony Smelter as of 1 May 2010, **R-84**.

1105 Mirones I, ¶ 116.

1106 Reply on Quantum, ¶ 161 (emphasis added).

US$ 485,660.[1107] Claimant's disingenuous attempt to appear reasonable should be rejected for, at least, two reasons:

732. *First*, contrary to Claimant's assertion, Ms Russo did not adopt Architect Mirones building valuation "*in an attempt to narrow the issues to be decided by this Tribunal*,"[1108] but rather because she could not rebut Architect Mirones' demonstration of the dire condition of the buildings.

733. Once Ms Russo finally decided to request access to the Antimony Smelter to visit the buildings (after Bolivia noted her failure to conduct a site visit in its Statement of Defence), it became obvious to her that she could not defend her exaggerated US$ 756,658.66 valuation of the buildings.

734. As Architect Mirones points out:

> *[l]a Arq. Russo tuvo oportunidad de inspeccionar las Edificaciones en su visita a la Fundidora de Antimonio el 23 de agosto de 2019 y no ha negado ni mi descripción del estado de deterioro de las Edificaciones ni que su desmantelamiento tenga un coste*.[1109]

735. Tellingly, still today, Ms Russo does not describe the true condition of the buildings or the perimeter fence in her Second Report. Contrary to what Ms Russo had indicated in her First Report, the buildings she observed first-hand during her recent visit are far from the "*calidad buena*"[1110] with "*un grado de conservación regular*" that she self-servingly affirmed before any visit,[1111] , as can be seen in the photos taken by Architect Mirones during his 22 May 2020 site visit:

1107 Russo II, ¶ 1.4(b).

1108 Reply on Quantum, ¶ 161.

1109 Mirones II, ¶ 120 (Unofficial translation: "*Ms Russo had the opportunity to inspect the Buildings on her visit to the Antimony Smelter on 23 August 2019 and she has not denied neither my description of the Buildings deterioration nor the fact that its dismantling has a cost.*").

1110 Russo I, ¶ 4.5.

1111 Russo I, ¶ 6.6.2 (Unofficial translation: "*good quality*" and "*regular state of conservation*").

Close-up of photographs of the Antimony Smelter buildings taken by Architect Mirones during his 22 May 2020 visit[1112]

736. *Second*, Ms Russo's attempt to inflate the value of the buildings by applying inflation should also be rejected. As mentioned above, Ms Russo's suggestion that the buildings would have appreciated with the passage of time is absurd.

[1112] Photos of the Antimony Smelter buildings taken by Architect Mirones during his 22 May 2020 visit, **DM-16**.

737. The buildings of the Antimony Smelter have been abandoned for years and have not been subject to maintenance or refurbishment. As such they have only residual value. As Architect Mirones concludes:

> *las Edificaciones cumplieron su vida útil. Son ruinas que no se aprecian, sino que representan un costo porque deben ser demolidas. Si a algo se debe aplicar el índice de inflación, sería al costo de demolición y desmantelamiento.*[1113]

738. It is, therefore, conceptually incorrect of Ms Russo to "update" their value with inflation. If anything should be updated in light of inflation, it should be the cost of dismantling and demolishing said buildings.

739. Hence, accepting Ms Russo's flawed and unreasonable valuation of the buildings would lead to an unjust enrichment by Claimant.

4.3.3 Ms Russo's Valuation Of The Land Is Also Speculative And Is Grossly Inflated

740. In her Second Expert Report, Ms Russo updates the value of the Land to US$ 2,962,290 as at 22 January 2020. Ms Russo's updated valuation of the Land continues to suffer from serious methodological flaws (**Section 4.3.3.1**) and remains highly speculative and grossly inflated (**Section 4.3.3.2**), as confirmed by the new documents submitted with her Second Expert Report.

4.3.3.1 Ms Russo's updated valuation remains methodologically flawed

741. In her Second Expert Report, to value the Land, Ms Russo continues to use the comparable transaction method,[1114] which is based on the principle that a person assessing the price to pay for a particular item will normally look to the price achieved for similar items in the market (*i.e.*, the comparable evidence) and make a bid accordingly. However, this is not what Ms Russo has done.

742. In essence, Ms Russo has based her valuation of the Land on evidence that is not really comparable, as she relies on information about residential areas, whereas she now expressly admits that the Land is industrial.[1115] Moreover, Ms Russo fails to rely on any actual market transactions and, instead, uses asking prices as advertised in the classified section of a local newspaper "*La Patria*" and unverified information from real estate agencies and appraisers for plots of land that are located in a different area of Oruro and have different characteristics

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[1113] Mirones II, ¶ 113 (Unofficial translation: "*the Buildings have reached the end of their useful life. They are ruins that do not increase in value, but represent a cost because they must be demolished. If there is one thing the inflation rate should be applied to, it would be the cost of demolition and dismantling*.") (emphasis added).

[1114] Russo II, ¶ 4.1.

[1115] Russo II, ¶ 3.1.

from those of the Land. Ms Russo's valuation is, therefore, flawed and unreliable as demonstrated by the following, three facts:

743. *First*, contrary to what Claimant posits,[1116] both of Ms Russo's sources for allegedly comparable transaction prices, *i.e.*, (i) ads for the sale of land plots published in local newspaper "*La Patria*" in August 2019, and (ii) appraisals by local architects and real estate agents,[1117] are unreliable.

744. Per Ms Russo's own description, her valuation is based on an average or mean base value per square meter derived from a series of so-called comparable properties.[1118]

745. Quadrant explains that:

> *[w]hen deriving parameters such as the mean from a sample of data, that parameter always has an associated level of uncertainty. That level of uncertainty depends on the underlying variability of the data – the higher the variability, the greater the level of uncertainty associated with the parameters derived from that sample*.[1119]

746. The variability of the data sample (in this case, the land prices collected by Ms Russo from the local newspaper and land appraisers) determines how uncertain the parameter obtained (in this case, the mean) is. This uncertainty is measured by standard deviation. In statistics, standard deviation measures the variation or dispersion of a set of values, *i.e.*, how spread out these values are.[1120] In a normal distribution (which is shaped like a bell curve), most of the values of the sample are close to the mean (*i.e.*, the average), with very few values tending to the extremes. In a non-normal distribution, the values are more spread out, leading to a greater level of uncertainty of the parameters that can be derived of that sample of values.

747. In the case at hand, Ms Russo's land price per square meter samples extraordinarily range from US$ 3/m² to US$ 90/m².[1121] The mean of Ms Russo's sample (as calculated by Quadrant) is US$ 39.68 per m^2.[1122] The standard deviation, which summarizes the amount by which every value within the sample varies from the mean, is of US$ 15.45 per m^2, indicating that the values in Ms Russo's sample "*are widely dispersed*".[1123] In more simple terms, the mean

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1116 Reply on Quantum, ¶ 168.

1117 Russo II, ¶ 4.2.

1118 Russo II, ¶ 4.3.

1119 Quadrant II, ¶ 131 (emphasis added).

1120 Quadrant II, ¶ 133.

1121 Russo II, Table 4.

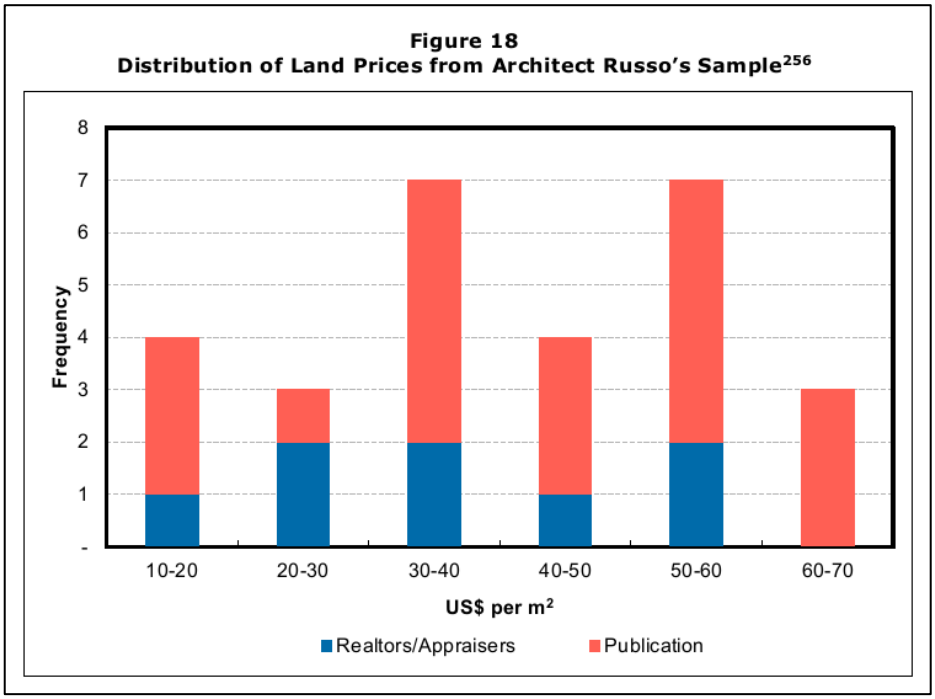
1122 Quadrant II, ¶ 133.

1123 Quadrant II, ¶ 133.

of Ms Russo's sample of land prices cannot serve as a reliable parameter, given that the sample values are too varied.

748. Ms Russo acknowledges the great variability (and unreliability) in her sample when she eliminates the most extreme values reported by appraisers and taken from local ads (US$ 3 m², US$ 4 m², US$ 70 m², and US$ 90 m²). However, even after Ms Russo eliminates the most extreme values from her sample data, the variability in the remaining values, which ranges from US$ 10 m² to US$ 60 m² (*i.e.*, a factor of 6), remains significant. As shown in the following figure, "*the data used by Architect Russo does not converge toward a central value*":[1124]

Figure 18
Distribution of Land Prices from Architect Russo's Sample[256]



749. While a normal distribution is shaped like a bell curve, Ms Russo' sample, even after her "corrections" and as seen in the chart above, is widely dispersed, with many values tending to the extremes (note that there are many prices that range from US$ 10-20 per m² and many prices that range from US$ 50-60 per m², far from the mean). As concluded by Quadrant, such a significant variance means "*one cannot conclude with reasonable certainty that the mean value of Architect Russo's sample is an accurate reflection of the value of the land of the Antimony Smelter*."[1125] The mean used by Ms Russo to value the Land is, therefore, unreliable.

1124 Quadrant II, ¶ 131 and Figure 18.

1125 Quadrant II, ¶ 133. See also ¶ 132.

750. *Second*, in addition to its statistical flaws, Ms Russo's so-called "comparables" are not really comparable to the Land.

751. To value the Land through the comparable transaction method, it is necessary to identify land with similar characteristics to the Antimony Smelter (*i.e.*, located in industrial areas, with similar surface, lacking public utilities, and influenced directly by highly polluting mining smelting industries, as all these factors affect its value).

752. As pointed out by Architect Mirones:

> *[e]stoy de acuerdo en que el método de comparables es "comúnmente utilizado" o, como yo mismo explico en mi Marco Teórico, uno de "los más empleados en valoración". Ahora bien, que exista un consenso sobre la utilidad del método de comparables no significa que su empleo sea imperioso y que no haya situaciones, como la presente, en las que no resulta aplicable.*[1126]

753. Indeed, the Barrientos Manual on which Ms Russo relies cautions that:

> *[c]uando éste método [de comparables] se expone en forma tan sencilla, da la impresión de que se trata de un problema de fácil solución y que basta presentar un informe con un listado de propiedades cercanas vendidas, sin tomar la precaución que ellas tengan alguna relación con la propiedad que se está valorando, debiéndose establecer la comparación de las ventas con el predio objeto de estudio, o sea que una mala interpretación o relación de la información puede generar una opinión adversa a la realidad.*[1127]

754. Architect Mirones explains that "*el método comparativo solo es apto para valuar bienes inmuebles siempre y cuando sea aplicado cumpliendo las exigencias que supone su utilización*".[1128] Quadrant concurs that:

> *While this method is used in practice, it can be highly speculative and unreliable if an adequate number of transactions on comparable properties cannot be found. […]*

1126 Mirones II, ¶ 53 (Unofficial translation: "*I agree that the comparables method is 'commonly used' or, as I explain in my Theoretical Framework, one of 'the most widely used in valuation'. However, the fact that there is a consensus on the usefulness of the comparables method does not mean that its use is imperative and that there are not situations, such as the present one, in which it is not applicable*."). See also Quadrant II, ¶ 126 ("*Architect Russo applies the comparable transaction method to value the land of the Antimony Smelter. While this method is used in practice, it can be highly speculative and unreliable if an adequate number of transactions on comparable properties cannot be found. This is the case for the land of the Antimony Smelter. In other words, land lots similar in size and characteristics to the land of the Antimony Smelter are rarely sold*.").

1127 Métodos para Avalúos de Bienes Inmuebles, Consultora Barrientos, **GR-18**, p. 44 (Unofficial translation: "*[w]hen this method [of comparables] is presented in such a simple way, it gives the impression that it is a problem of easy solution and that it is enough to present a report with a list of nearby sold properties, without taking the precaution that they have some relation with the property that is being valued, being necessary to establish the comparison of the sales with the property object of study, that is to say that a bad interpretation or relation of the information can generate an adverse opinion to the reality*.") (emphasis added).

1128 Mirones II, ¶ 57 (Unofficial translation: "*[t]he comparative method is only suitable for the valuation of real estate as long as it is applied in accordance with its requirements*.") (emphasis in the original).

> *As the Appraisal Institute explains, valuations following the comparable approach used by Architect Russo must:*
>
> *[c]onsider the characteristics of the properties such as property type, date of sale, size, physical condition, location, and land use constraints. The goal is to find a set of comparable sales as similar as possible to the subject property to ensure they reflect the actions of similar buyers.*[1129]

755. In spite of the known risks in applying this method, none of the so-called comparables Ms Russo relies upon in her Second Report are "*comparativamente significativos*", as required by the method:

> *[P]ara determinar el valor de la propiedad, lo primero que debemos hacer es comparar las características intrínsecas del predio que necesitamos valuar con cada uno de los predios [referenciales], y de acuerdo a este análisis se deben homogenizar los valores de sus características a fin de que todos los terrenos puedan ser comparativamente significativos.*[1130]

756. This is demonstrated by, at least, the following two examples:

757. **One, none of Ms Russo's so-called comparables are industrial areas**. In fact, the map (in black below) provided by Ms Russo to the appraisers locates the Land in a residential area outside the EMV industrial compound:

1129 Quadrant II, ¶¶ 126-127.

1130 Métodos para Avalúos de Bienes Inmuebles, Consultora Barrientos, **GR-18**, p. 48 (Unofficial translation: "*[I]n order to determine the value of the property, the first thing we must do is compare the intrinsic characteristics of the property we need to value with each of the [reference] properties, and according to this analysis the values of its characteristics must be homogenized so that all the properties can be comparatively significant.*") (emphasis added).

Extract of the map provided by Ms Russo to local appraisers wrongly identifying the land to be valued in black, Annex GR-27 (the accurate location is in red)

758. Such an elementary mistake shows Ms Russo's lack of rigor (at best). The misidentification of the Land location confirms that, despite her assertion to the contrary in her most recent report,[1131] Ms Russo valued the Land as if it were residential, which is why all of her so-called comparables are located in residential areas or with potential residential use.

759. In fact, all of the new appraisals by local architects and real estate agents submitted with Ms Russo's Second Report[1132] are based on an incorrect location of the Land. All considered "*Residencial*" land for a "*vivienda familiar*",[1133] or land "*al frente del Complejo Metalúrgico Vinto*"[1134] (whereas the Land is within the Vinto compound).

760. Consequently, as Quadrant concludes, "*it would be inappropriate to estimate the value of its land based on the sales price of land plots that can accommodate residential and commercial land uses*".[1135]

761. Even assuming that the Land could be requalified/rezoned from its current industrial use to residential use (*quod non*, among others, given the "*significant soil pollution which affect a large cercle around the plant […]*"[1136] and permanent "*pluma de arsénico y azufre generada*

1131 Russo II, ¶ 3.4.6 ("*Crítica por supuesto uso residencial del terreno: En el Avalúo Mirones se indica que en el Avalúo Original yo habría sugerido que en el futuro el terreno de la Fundición de Antimonio podría tener un uso residencial, lo cual el Arq. Mirones descarta por una variedad de factores. Sin embargo, nunca en mi Avalúo Original yo indico que el terreno de la Fundición de Antimonio fuera a tener un uso residencial. Lejos de efectuar una valoración para uso residencial de los terrenos de la Fundición de Antimonio, en repetidas ocasiones en el Avalúo Original consideré un uso industrial para los mismos, notando simplemente que el crecimiento urbanístico de las áreas próximas a la Fundición daba al terreno un potencial de mayor valor, pero sin que ello cambie su innegable uso industrial*").

1132 Carta del Arquitecto Perito Franz Dávalos Humerez (CAB 4325) a la Arquitecta Gina Russo Asbún, **GR-27-A**; Carta de la Arquitecta Perito Jenny Coca Correa (CAB 8372) a la Arquitecta Gina Russo Asbún, **GR-27-B**; Carta del Arquitecto Perito Marcos De La Barra Molina (CAB 5228) a la Arquitecta Gina Russo Asbún, **GR-27-C**; Carta del Arquitecto Perito Richard Flores Montecinos (CAB 4080) a la Arquitecta Gina Russo Asbún, **GR-27-D**; Carta del Arquitecto Perito Richard Lima Soria (CAB 5415) a la Arquitecta Gina Russo Asbún, **GR-27-E**; Carta del Arquitecto Perito Christian Oxachoque Gutiérrez (CAB 7877) a la Arquitecta Gina Russo Asbún, **GR-27-F**; Carta de la Arquitecta Perito Mercedes María Quiroga (CAB 9683) a la Arquitecta Gina Russo Asbún, **GR-27-G**; Carta de la Arquitecta Perito Jessica Lizbeth Quiroz (CAB 8906) Arquitecta Gina Russo Asbún, **GR-27-H**; Carta del Arquitecto Perito Daniel Taquichiri Canaviri (CAB 8295) a la Arquitecta Gina Russo Asbún, **GR-27-I**.

1133 Carta del Arquitecto Perito Daniel Taquichiri Canaviri (CAB 8295) a la Arquitecta Gina Russo Asbún, **GR-27-I** (Unofficial translation: "*Residential*" and "*family home*").

1134 Carta de la Arquitecta Perito Mercedes María Quiroga (CAB 9683) a la Arquitecta Gina Russo Asbún, **GR-27-G** (Unofficial translation: "*in front of the Vinto Metallurgical Complex*").

1135 Quadrant II, ¶ 130.

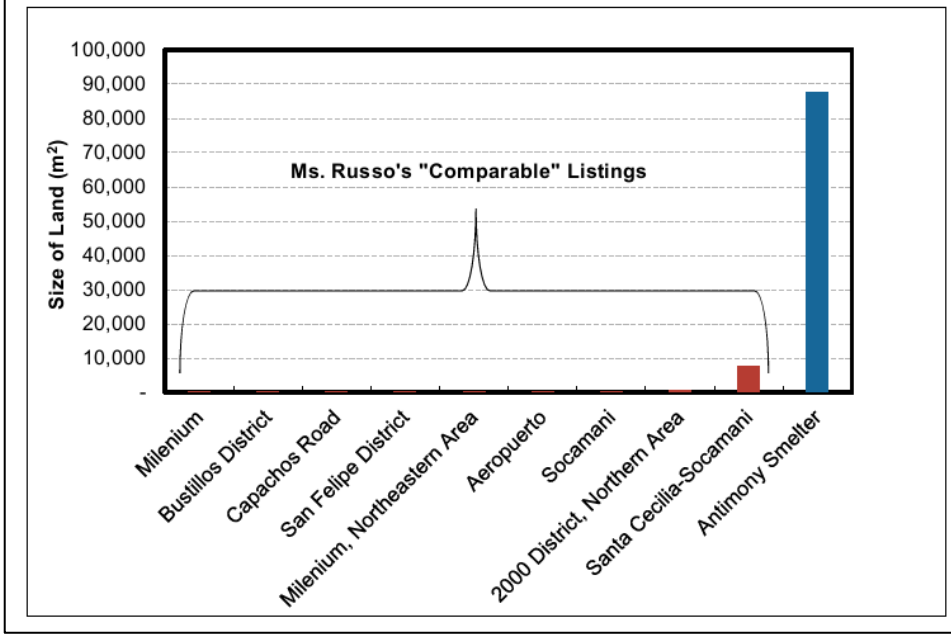
1136 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**, pp. 6-7.

por los procesos de tostación de la Fundidora de Vinto")[1137], the cost of remediating the heavy metal contamination in the soil would exceed the value of the Land.

762. **Two, none of the plots used by Ms Russo as so-called comparables come close to the Land's extension of 87,496.40 m²**.[1138]

763. As illustrated by Quadrant in the graph below, the largest plot of land advertised for sale in the local newspaper used by Ms Russo (the Santa Cecilia-Socamani plot) is 7,600 m², *i.e.*, less than 10% of the Land's extension:[1139]

Figure 17
Size of the Antimony Smelter's Land vs. Architect Russo's "Comparable" Listings[251]



764. As Quadrant explains, "*[g]iven their their small size, some of these land plots included in Architect Russo's sample could involve properties that are not used and cannot be used for smelting or other industrial operations.*"[1140]

765. The extension of the plots is a relevant parameter in any real estate valuation, given that, as explained by Architect Mirones:

> *[u]n lote de gran superficie como este en el mercado tendría menor circulación que uno de menor superficie, debido tanto al capital que un eventual comprador tendría*

1137 Villavicencio I, ¶ 109 (Unofficial translation: "*a constant plume of arsenic and sulfur generated by the smelting processes of the Vinto Smelter*").

1138 Russo II, ¶ 3.1.

1139 Quadrant II, Figure 17.

1140 Quadrant II, ¶ 130.

> *que desembolsar para adquirirlo como por el uso que se puede dar a ese tipo de terreno. La baja demanda de terrenos de gran extensión repercute negativamente en su precio en el mercado.*[1141]

766. In light of the above, Architect Mirones explains that, contrary to Ms Russo's suggestion, it is not possible to homogenize the values resulting from Ms Russo's so-called comparable plots of land.[1142] Any such adjustments in the circumstances would not be "*reasonable*", per the recommendation of the International Valuation Standards Council (which Ms Russo mentions in her report). As a result, the market value of the Land can only be objectively calculated taking its cadastral value as a starting point, as Architect Mirones does.[1143]

767. *Third*, despite the fact that "*[t]he sales comparison approach is applicable when sufficient data on recent market transactions is available [and that,] [i]f no sales are found, the appraiser may have to use other approaches to value […]*",[1144] Ms Russo does not rely on any actual market transactions.

768. Instead of using final prices from recent or historical market transactions, Ms Russo relies on asking prices which are not representative of market conditions. For this, Ms Russo claims that "*no exist[e] en Oruro disponibilidad de información oficial de transacciones históricas de venta de inmuebles.*"[1145]

769. As explained by Architect Mirones:

> *los datos que aportan las inmobiliarias son datos especulativos que tienen a reflejar los valores más altos del mercado. No hay que olvidar que la actividad de las inmobiliarias consiste, precisamente, en intentar vender inmuebles (con fines de vivienda) al mayor precio posible, lo que les permite ganar comisiones (calculadas como un porcentaje del precio de venta del inmueble).*[1146]

770. Fully cognizant of the fact that asking prices are speculative and unreliable, Ms Russo applies "*a 10% discount to reflect the fact that published values per square meter are usually slightly*

1141 Mirones II, ¶ 61 (Unofficial translation: "*[a] large plot of land like this one would have less circulation on the market than a smaller one, both because of the capital that a potential buyer would have to pay to acquire it and because of the use that can be given to such land. Low demand for large plots of land has a negative impact on their price on the market.*").

1142 Mirones II, ¶ 72.

1143 See Section 4.3.4 below. See also Mirones II, Section 4.3.

1144 The Appraisal of Real Estate, 13th Edition (2008), The Appraisal Institute, **QE-74**, p. 300.

1145 Russo II, ¶ 4.4.8 (Unofficial translation: "*there is no official information available in Oruro on historical real estate transactions.*").

1146 Mirones I, ¶ 45 (Unofficial translation: "*data provided by real estate companies are speculative data that tends to reflect the highest values in the market. We should not forget that the business of real estate companies consists, precisely, in trying to sell real estate (for housing purposes) at the highest possible price, which allows them to earn commissions (calculated as a percentage of the sale price of the property).*") (emphasis added).

reduced in the negotiation that takes place at the time of the actual transaction".[1147] However, Ms Russo does not explain how she calculated such a discount or why a 10% discount (as opposed to a higher discount) would be sufficient to account for the negotiation margin.

771. As Architect Mirones explains:

> *En mi experiencia, es prácticamente imposible precisar el margen de negociación dado que existen situaciones muy distintas (personas, que por necesidad, venden los terrenos a cualquier valor por más bajo que sea el precio que les ofrecen y otras que especulan con los terrenos para obtener beneficios).*[1148]

772. *Fourth*, the land prices from newspaper ads and local real estate agents summarized by Ms Russo in tabular form in her reports are also unverified and unsubstantiated.

773. Ms Russo submits extracts of the newspaper "*La Patria*", but the vast majority of ads do not indicate a price. While Ms Russo claims to have consulted the prices by telephone, she does not submit any record or even notes of these calls.

774. In response to Bolivia's document request No. 40[1149] seeking "*[t]he Document generated in anticipation of as well as those generated as a result of the 'llamadas telefónicas efectuadas por la suscrita [Ms Russo] a las partes vendedoras en cada publicación [el Diario La Patria]' to obtain sales values (Russo Report, Table 1, footnote n. 19), including but not limited to […]*", Claimant confirmed that "***no Documents exist*** *that would correspond to Request 40*".[1150]

775. Neither has Claimant produced any document "*exchanged between Ms Russo and/or anyone working under her control and any of the "inmobiliarias" and/or "peritos valuadores"; [or] the notes taken by Ms Russo and/or by anyone working under her control in preparation for and/or resulting from meetings and/or phone calls with any of the "inmobiliarias" and/or*

1147 Russo II, ¶ 4.16 (unofficial translation).

1148 Mirones II, ¶ 94 (Unofficial translation: "*[i]n my experience, it is virtually impossible to specify the margin for negotiation because there are very different situations (people who, out of necessity, sell the land at whatever value they are offered and others who speculate on the land to make a profit).*").

1149 Annex 2 to Procedural Order No. 9 of 30 September 2019, Bolivia's Document Request No. 40 ("*The Document generated in anticipation of as well as those generated as a result of the "llamadas telefónicas efectuadas por la suscrita [Ms Russo] a las partes vendedoras en cada publicación [el Diario La Patria]" to obtain sales values (Russo Report, Table 1, footnote n. 19), including but not limited to: a. Documents sufficient to identify the individuals with whom Ms. Russo had each of the phone calls and the date of such calls; b. the notes taken by Ms Russo and/or by anyone working under her control in preparation for and/or resulting from each of these phone calls; and c. the Correspondence exchanged by Ms Russo and/or by anyone working under her control in relation to these phone calls*.")

1150 Annex 2 to Procedural Order No. 9 of 30 September 2019, Bolivia's Document Request No. 40 (emphasis added).

"peritos valuadores", despite being ordered to do so by the Tribunal in response to Bolivia's document request No. 39.[1151]

776. In essence, Ms Russo would want this Tribunal to value the Land on the basis of what unidentified sources told her over the phone without any contemporaneous evidence (not even a single document showing, for instance, that calls were actually made). This is insufficient to meet Claimant's burden of proof regarding the value of the Land.

4.3.3.2 Ms Russo's updated valuation of the Land remains speculative and grossly inflated

777. In addition to being methodologically flawed and unsupported (which should suffice to invalidate her valuation), Ms Russo's updated valuation of the Land is still speculative and grossly inflated for, at least, five reasons:

778. *First*, while Ms Russo claims that she values the Land as industrial (as it should be, given that it is earmarked for industrial use), she glosses over the fact that no new smelting activity can be carried out in the Land, since, in 2014, all new mining activity (including smelting) was forbidden within city limits or within 100 meters of roads (as is the case with the Antimony Smelter).[1152]

779. Ms Russo also neglects that a hypothetical willing buyer seeking to acquire the Land for industrial purposes would also consider the fierce opposition by Vinto residents to polluting industrial activities operating in the area,[1153] which has forced the Municipality of Oruro to issue a decree prohibiting new industries in the Vinto sector,[1154] thereby depriving the Land of any future industrial use:

1151 Annex 2 to Procedural Order No. 9 of 30 September 2019, Bolivia's Document Request No. 39 ("*With respect to the "[v]alor de mercado […] provisto por inmobiliarias […] y por peritos valuadores que trabajan en Bolivia […]" (Russo Report, ¶ 5.2 b)): a. the Documents and Correspondence exchanged between Ms Russo and/or anyone working under her control and any of the "inmobiliarias" and/or "peritos valuadores"; and b. the notes taken by Ms Russo and/or by anyone working under her control in preparation for and/or resulting from meetings and/or phone calls with any of the "inmobiliarias" and/or "peritos valuadores*.").

1152 Law No. 535 of Mining and Metallurgy of 28 May 2014, **R-441**, Art. 93.

1153 La Patria, *Autoridades y vecinos buscan consolidar un sector para el Parque Industrial*, press article of 28 August 2017, **R-522**; El Sajama, *Levanten el bloqueo del camino en la zona de Vinto*, press article of 20 April 2016, **R-520**; El Diario, *Vecinos levantan bloqueo del camino Oruro-Potosi*, press article, **R-521**.

1154 Oruro Municipal Decree No. 058 of 31 October 2016, **R-440**, Article 1.

 Vecinos de zona de Vinto habla con autoridades sobre contaminación ambiental pero mantienen bloqueo - Oruro, 20 abr (ABI).- Vecinos de la zona de Vinto, que exige el retiro de empresas industriales que contaminan el medio ambiente, iniciaron el miércoles a las 11h00 el diálogo con las autoridades departamentales y municipales de Oruro para resolver ese conflicto y poner fin a un bloqueo de caminos.	 Un segundo punto se **analizará la legalidad de las empresas industriales asentadas en Vinto** a través de una comisión mixta integrada por el Ministerio de Medio Ambiente, la Gobernación y la Alcaldía. En cuanto al pedido de la reubicación de las empresas, se acordó **consolidar un parque industrial** y, como último punto, la Alcaldía buscará el **financiamiento para el traslado del Matadero.** Ese acuerdo acabó el bloqueo de la carretera que los vecinos de Vinto iniciaron el pasado lunes.
Extract from El Sajama, *Levanten el bloqueo del camino en la zona de Vinto*, press article of 20 April 2016, **R-520**	Extract from Los Tiempos, *Oruro: Vecinos de Vinto y autoridades firman acuerdo y levantan bloqueos*, press article of 20 April 2016, **R-528**

780. Consequently, the Land's commercial value is nil.

781. *Second*, Ms Russo's valuation deliberately ignores that the Antimony Smelter is an environmental liability and that any willing buyer would account for environmental clean-up costs, thereby reducing the value of the Land. Claimant, however, asserts that "*Bolivia has failed to meet its burden to provide concrete evidence of the alleged pollution, nor has it proven that the pollution was caused by Glencore Bermuda*"[1155] and that "*because Colquiri never operated the Antimony Smelter, any pollution would have been caused by the State prior to the privatization […]*".[1156] This is wrong as a matter of fact and law.

782. On the one hand, it cannot be disputed that smelting is a polluting activity. The Antimony Smelter was active until the late 90s and again for a few months in 2002.[1157] As a result, it generated contaminated industrial waste ("*como escoria con óxidos de hierro y de calcio (un material particularmente duro y difícil de retirar) y […] desechos de arsénico en una piscina ubicada al este del terreno*"[1158]). In fact, Claimant's technical due diligence team that visited the "*Vinto plants*" in November 2004 identified "*significant soil pollution which affect a large cercle around the plant, the soil pollution is significative till 1 km from the roaster plant and is noticeable till 2.5 km [sic]. […] Another noticeable pollution issue is the remediation of 3 ponds of which represent somme 10 000 m2 [sic].*"[1159]

783. Ms Russo also acknowledges that "*en mi visita a la Fundición de Antimonio advertí la presencia de lo que parecía ser escoria y una piscina con un depósito liquido en ella*".[1160]

1155 Reply on Quantum, ¶ 170.

1156 Reply on Quantum, ¶ 170.

1157 Villavicencio I, ¶¶ 89-94, 107, 109.

1158 Villavicencio I, ¶ 107 (Unofficial translation: "*such as slag with iron and calcium oxide (a particular tough material and difficult to remove) and […] arsenic waste in a pit located to the east of the land*").

1159 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**, pp. 6-7.

1160 Russo II, ¶ 3.4.8 (emphasis added) (Unofficial translation: "*on my visit to the Antimony Smelter I noticed the presence of what appeared to be slag and a pool containing a liquid substance*").

Instead of taking these potential liabilities into account in her valuation as a willing buyer would have done, Ms Russo deliberately ignores their impact on value by stating that "*no [le] consta el tenor ni materiales de su contenido, y el Arq. Mirones no acompaña ninguna evidencia que certifique dichos extremos.*"[1161]

784. Claimant's and Ms Russo's decision to ignore any remediation and clean-up costs from the Land's valuation because "*Arq.Mirones no acompaña ninguna evidencia*" is not only unreasonable (as Claimant has recognized the existence of "*significant soil pollution*"[1162]) and conflicting with the principle guiding that a valuator should err in favour of the most prudent valuation, but contrary to Claimant's burden to consider all aspects that a well-informed willing buyer would have factored into its valuation of the Antimony Smelter.

785. As proven by the fact that Claimant's own 2004 due diligence identified "*significant*" and "*noticeable*" environmental issues at the site, any willing buyer would have reasonably assessed the impact of remediation costs in its valuation. As Glencore itself described, there is "*significant soil pollution which affect a large cercle around the plant […] till 1 km from the roaster plant […] noticeable till 2.5 km [and] the remediation of 3 ponds of which represent somme 10 000 m2 [sic].*"[1163]

786. On the other hand, pursuant to the 2009 Bolivian Constitution, all operators of environmentally risky activities (such as smelting and, more generally, mining) have an obligation to remediate the harm caused to the environment:

> *[e]l Estado y la sociedad promoverán la mitigación de los efectos nocivos al medio ambiente, y de los pasivos ambientales que afectan al país. Se declara la responsabilidad por los daños ambientales históricos y la imprescriptibilidad de los delitos ambientales.*
>
> *Quienes realicen actividades de impacto sobre el medio ambiente deberán, en todas las etapas de la producción, evitar, minimizar, mitigar, remediar, reparar y resarcir los daños que se ocasionen al medio ambiente y a la salud de las personas, y establecerán las medidas de seguridad necesarias para neutralizar los efectos posibles de los pasivos ambientales.*[1164]

1161 Russo II, ¶ 3.4.8 (Unofficial translation: "*[she is] not aware of its contents or materials, and Architect Mirones has provided no evidence certifying such facts.*").

1162 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**, pp. 6-7

1163 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**, pp. 6-7.

1164 Constitution of Bolivia of 7 February 2009, **C-95**, Article 347 (Unofficial translation: "*The State and society shall promote the mitigation of harmful effects on the environment, and of environmental liabilities affecting the country. Liability for environmental damage is declared historical as well as the non-applicability of statutory limitations to environmental crimes. Those engaged in activities that impact on the environment shall, at all stages of production, prevent, minimize, mitigate, remediate, repair and compensate for damage to the environment and human health, and shall establish the necessary safety measures to neutralize the possible effects of environmental liabilities.*").

787. Claimant bears the burden of proving that it should not be liable for the contamination at the Antimony Smelter. Claimant has failed to do so.

788. In accordance with the 2002 Sale and Purchase Agreement between the Ministry of External Trade and Investment, Comibol, Empresa Minera Colquiri and Compañía Minera Del Sur ("**Comsur**") for the purchase of the Antimony Smelter, Comsur, as the purchaser, was obligated to perform an environmental baseline study within 6 months of acquiring the Antimony Smelter:

> *[e]s* ***obligación de la COMPRADORA [i.e., Comsur] realizar un estudio de Auditoria Ambiental de Línea Base (ALBA)*** *de acuerdo y en conformidad con lo establecido en la LEY APLICABLE,* ***en un plazo no mayor a seis (6) meses computables a partir de la ENTREGA FISICA****, este plazo podrá únicamente suspenderse por circunstancias de imposibilidad sobrevenida no imputable a la COMPRADORA. Se deja claramente establecido que la COMPRADORA asume-únicamente responsabilidad ambiental-por emisiones y descargas futuras resultantes de sus operaciones industriales u otros hechos pasibles de responsabilidad ambiental que sean resultado exclusivo de sus propias operaciones o actividades, a partir de la ENTREGA FISICA.* ***En caso de incumplimiento con la entrega del ALBA en un plazo no mayor a seis (6) meses a partir de la puesta en vigencia del CONTRATO, la COMPRADORA asumirá la total responsabilidad por daños al Medio Ambiente, por daños anteriores y posteriores a la transferencia****. Las responsabilidades ambientales determinadas en el estudio ALBA no podrán obligar a las partes si previamente no se encuentran aprobadas por la autoridad ambiental competente antes sin perjuicio de las obligaciones que por ley correspondan a la VENDEDORA.*[1165]

789. Claimant has not established that Comsur performed such baseline study (as a matter of fact, it did not). Hence, Comsur (and Glencore as its successor operator) assumed liability for any existing contamination regardless of when it was caused.

790. Even if Claimant could show that the contamination would have been caused prior to its acquisition of the Antimony Smelter in 2005, it bears the burden of showing that it performed

[1165] Notarization of the sale and purchase agreement of the Vinto Antimony Smelter between the Ministry of External Trade and Investment, Comibol, Empresa Minera Colquiri and Compañía Minera Del Sur SA of 11 January 2002, **C-9**, Clause 10.1 (emphasis added) (Unofficial translation: "*It is the obligation of the PURCHASER [i.e., Comsur] to carry out a Baseline Environmental Audit (ALBA) study in accordance with and in conformity with the provisions of the APPLICABLE LAW, within a period not exceeding six (6) months computable from the date of the PHYSICAL DELIVERY, this period may only be suspended due to circumstances of supervening impossibility not attributable to the PURCHASER. It is clearly established that the PURCHASER assumes -only environmental responsibility- for future emissions and discharges resulting from its industrial operations or other events subject to environmental responsibility that are the exclusive result of its own operations or activities, starting from the PHYSICAL DELIVERY.* ***In case of noncompliance with the delivery of the ALBA within a period not exceeding six (6) months from the effective date of the CONTRACT, the PURCHASER will assume total responsibility for damages to the Environment, for damages before and after the transfer****. The environmental responsibilities determined in the ALBA study may not bind the parties if they are not previously approved by the competent environmental authority without prejudice to the obligations that by law correspond to the SELLER.*").

its own baseline study at the time of its acquisition, given that, otherwise, it assumed all liability pursuant to Bolivian environmental regulations for the mining sector:

> *[s]i el concesionario u operador minero no realiza la ALBA asume la responsabilidad de mitigar todos los daños ambientales originados en su concesión y actividades mineras.*[1166]

791. Claimant has neither submitted nor alleged to have performed such baseline study at the time it acquired the Antimony Smelter. In fact, Claimant waived any claims against Comsur arising out of or relating to any environmental liabilities:

> *the Buyer [i.e., Glencore], on behalf of itself and the Buyer Indemnified Parties, waives any rights and claims it or any Buyer Indemnified Party may have against the Seller, whether in law or equity. Relating to the Company or its Subsidiaries or the transactions contemplated hereby. The rights and claims waived by the Buyer Indemnified Parties include, without limitation, claims for contribution or other rights of recovery arising out of or relating to any Environmental Laws, claims for breach of contract, breach of representation or warranty, negligent misrepresentation and all other claims for breach of duty.*[1167]

792. Consequently, in the absence of a baseline study and given that Claimant waived its "*rights*" and "*claims for contribution or other rights of recovery arising out of or relating to any Environmental Laws*", it is liable for the remediation of contamination at the Antimony Smelter. Any willing buyer would have discounted the remediation and clean-up costs assumed by Claimant from the value it would pay for the Antimony Smelter.

793. *Third,* Ms Russo surprisingly suggests that remediation costs should only be considered if the Land were to serve a residential purpose. This is incorrect.

794. The 1992 Bolivian Environmental Law establishes "*las normas técnicas correspondientes que determinarán los límites permisibles para las diferentes acciones y efectos de las actividades mineras*".[1168] For its part, the *Reglamento Ambiental para Actividades Mineras* (in force since

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1166 Supreme Decree No. 24782, Reglamento Ambiental para Actividades Mineras of 31 July 1997, **R-523**, Article 16 ("*El concesionario u operador minero no es responsable por las condiciones ambientales identificadas en la ALBA. La degradación de dichas condiciones ambientales que pudiera resultar de actividades mineras que cumplan con los límites permisibles vigentes no es responsabilidad del concesionario u operador minero. Si el concesionario u operador minero no realiza la ALBA asume la responsabilidad de mitigar todos los daños ambientales originados en su concesión y actividades mineras*.") (Unofficial translation: "*The concessionaire or mining operator is not responsible for the environmental conditions identified in the ALBA. The degradation of such environmental conditions that may result from mining activities that comply with current permissible limits is not the responsibility of the concessionaire or mining operator. If the concessionaire or mining operator does not carry out ALBA, it assumes the responsibility to mitigate all environmental damage caused by its concession and mining activities*.").

1167 Second Amended and Restated Stock Purchase Agreement between Minera and Glencore International (Iris shares) of 30 January 2005, **C-198**, p. 32, Section 7.9 (emphasis added). See also Stock Purchase Agreement between Minera and Glencore International (Shattuck shares) of 30 January 2005, **C-199**, p. 30.

1168 Law No. 1333, Environmental Law of 27 April 1992, **R-524**, Article 72 ("*El Ministerio de Minería y Metalurgia, en coordinación con la Secretaría Nacional del Medio Ambiente, establecerá las normas técnicas correspondientes que determinarán los límites permisibles para las diferentes acciones y efectos de las actividades mineras*.") (Unofficial translation: "*The Ministry of Mining and Metallurgy, in coordination with the National Secretariat of the Environment,*

1997) defines the permissible limits of emissions and waste within which all mining operators must function.[1169]

795. Nothing in these regulations limits the obligation to remediate to residential land, as Ms Russo posits. Hence, any exceedance of those limits (of organic and inorganic compounds) constitutes a "*pasivo ambiental*" warranting remedial action that is not subject to any statute of limitations.

796. *Fourth*, Claimant's valuation of the Antimony Smelter is also inflated because it ignores the 3% municipal tax applicable to real estate transactions.[1170] As a real estate valuator, Ms Russo should have identified the applicability of a tax on *real estate* transfers. She did not, which demonstrates how disconnected her valuation is from the reality of the market on which the Antimony Smelter is located. As a result, Compass Lexecon did not deduct this tax from its valuation.

797. Consequently, Quadrant has adjusted Compass Lexecon's valuation of the Antimony Smelter to account for this tax.[1171]

798. *Lastly*, Claimant desperately attempts to justify "*the reasonableness of Ms Russo's valuation [as being] corroborated by the purchase price of the Antimony Smelter. When it was privatized [in 2002], the purchase price of the Antimony Smelter [paid by Comsur not*

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will establish the corresponding technical standards that will determine the permissible limits for the different actions and effects of mining activities.").

1169 Supreme Decree No. 24782, Reglamento Ambiental para Actividades Mineras of 31 July 1997, **R-523**.

1170 Law No. 843 and Regulatory Decrees, **R-525**, Articles 72, 75 and 107. ("*ARTÍCULO 72°.- El ejercicio en el territorio nacional, del comercio, industria, profesión, oficio, negocio, alquiler de bienes, obras y servicios o de cualquier otra actividad - lucrativa o no - cualquiera sea la naturaleza del sujeto que la preste, estará alcanzado con el impuesto que crea este Título, que se denominará Impuesto a las Transacciones, en las condiciones que se determinan en los artículos siguientes. También están incluidos en el objeto de este impuesto los actos a título gratuito que supongan la transferencia de dominio de bienes muebles, inmuebles y derechos. […] ARTÍCULO 75°- Se establece una alícuota general del tres por ciento (3%). […] ARTÍCULO 107°- Se establece que el Impuesto a las Transacciones que grava las transferencias eventuales de inmuebles y vehículos automotores es de Dominio Tributario Municipal, pasando a denominarse Impuesto Municipal a las Transferencias de Inmuebles y Vehículos Automotores, que se aplicará bajo las mismas normas establecidas en el Título VI de la Ley N° 843 (Texto Ordenado Vigente) y sus reglamentos. No pertenecen al Dominio Tributario Municipal el Impuesto a las Transacciones que grava la venta de inmuebles y vehículos automotores efectuada dentro de su giro por casas comerciales, importadoras y fabricantes*") (Unofficial translation: "*ARTICLE 72° - The exercise of commerce, industry, profession, trade, business, rental of goods, works and services or of any other activity - profitable or not - in the national territory, whatever the nature of the person that exercises it, will attract the tax created by this Title, which will be called Transaction Tax, under the conditions determined in the following articles. Also included in the object of this tax are acts for no consideration that involve the transfer of ownership of personal property, real estate and rights. […] ARTICLE 75°- A general rate of three percent (3%) is established. […] ARTICLE 107 °- It is established that the Transaction Tax that is imposed on eventual transfers of real estate and motor vehicles is of the Municipal Tax Domain, denominated the Municipal Tax on Transfers of Real Estate and Motor Vehicles, which will be applied under the same rules established in Title VI of Law No. 843 (text currently in force) and its regulations. The Tax on Transactions, which is levied on the sale of real estate and motor vehicles made within its business by commercial houses, importers and manufacturers, does not belong to the Municipal Tax Domain*"). See also Law No. 843 and Regulatory Decrees, **R-525**, Supreme Decree No. 54024.

1171 Quadrant II, ¶ 135.

Glencore] was US$1.1 million. If it is only updated for inflation to the date of this Reply on Quantum, the Antimony Smelter's purchase price is worth US$2.6 million today."[1172]

799. Claimant's reference to the price that Comsur (not Glencore) paid for the Antimony Smelter defies all logic, as there is a more recent and relevant transaction (the acquisition by Glencore in 2005). Claimant's omission is not innocent. On the one hand, Claimant has never disclosed how much (if anything) it paid for the Antimony Smelter in 2005, which suggests that any comparison would confirm that any damages awarded by the Tribunal for the Antimony Smelter will constitute a windfall for Claimant. On the other hand, Claimant disregards what happened (or rather did not happen) since 2002 at the Antimony Smelter, which has fallen into ruins due to the lack of activity and maintenance. As such, it is improper to apply inflation to something that has reached its useful life.

4.3.4 Conversely, Architect Mirones' valuation of the Land is methodologically sound and tethered to the reality of the Antimony Smelter

800. In his First Expert Report, Architect Mirones valued the Land based on two visits to the property and his knowledge of the Oruro area, where he practices. Given that the Antimony Smelter's characteristics (e.g., size of the land, location, irregular shape, lack of direct access to access roads, absence of direct access to utilities and the environmental liabilities of the Land) are so unique – thus making it impossible to identify truly comparable transactions – Architect Mirones started its valuation by considering the cadaster value of the Land and applied corrective factors in order to calculate the FMV of the Land as of 30 April 2010.[1173]

801. In its Reply on Quantum, Claimant criticizes Architect Mirones' valuation for relying on the cadastral value of the Land and applying adjustments that would result in a "*steeper discount than Ms Russo's adjustments*."[1174] Claimant's criticisms must be rejected for, at least, two reasons:

802. *First*, Claimant argues that "*the fiscal value of the land is an inappropriate measure of FMV that grossly undervalues the land.*"[1175] But Claimant and Ms. Russo purposefully confuse Architect Mirones' valuation method.

803. At no point has Architect Mirones equated cadaster or fiscal value to FMV. As clearly explained in his First Expert Report, in the absence of comparable market transactions,

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[1172] Reply on Quantum, ¶ 172.

[1173] Mirones I, Section 7.2. See also Statement of Defence, ¶¶ 902-905.

[1174] Reply on Quantum, ¶ 163.

[1175] Reply on Quantum, ¶ 165.

Architect Mirones took the cadaster or fiscal value of the Land as a starting point to calculate its FMV. As put by Architect Mirones:

> *[e]n mi Primer Informe expliqué que el valor justo de mercado del Terreno debe calcularse partiendo de su valor catastral, que luego debe ser ajustado tomando en consideración las características propias del predio para determinar su justo valor de mercado en la fecha de valuación.*[1176]

804. *Second*, Claimant alleges that "*Mr Mirones is wrong to assert that any existing pollution in the land on which the Antimony Smelter is located reduces the land's value*".[1177] Claimant's criticism is facetious.

805. As mentioned above, it should be undisputed that smelting is a polluting activity and that the Land is contaminated as a consequence of the Antimony Smelter's activity and its location within the operating Tin Smelter. In fact, in 2004, Claimant's technical due diligence team noted "*significant soil pollution which affect a large cercle around the plant […] till 1 km from the roaster plant […] noticeable till 2.5 km*" in the "*Vinto plants*".[1178]

806. It is preposterous to suggest, as Claimant does, that all else equal a polluted land would be valued as pristine land. Architect Mirones is, therefore, correct to assert that the pollution reduces the Land's value. Even if Ms Russo were correct and remediation costs should only be considered if the Land were to serve a residential purpose (*quod non*), the Land would still be worth less than pristine land given the environmental liability.

807. Thus, as concluded by Architect Mirones:

> *un eventual comprador de la Fundidora de Antimonio descontaría los costos de cierre y remediación de pasivos ambientales al estimar el precio del Terreno. Incluso un comprador que pretenda seguir haciendo uso industrial del Terreno consideraría tales costos de remediación al negociar su precio de adquisición, pues sabe que su industria tendrá que adaptarse a la normativa ambiental vigente y que tendrá que remediar los pasivos ambientales.*[1179]

1176 Mirones II, ¶ 101 (emphasis in the original) (Unofficial translation: "*[i]n my First Report I explained that the fair market value of the Land should be calculated starting with its cadastral value, which should then be adjusted taking into account the characteristics of the property to determine its fair market value on the valuation date.*").

1177 Reply on Quantum, ¶ 170.

1178 Glencore interoffice report from Mr Vix to Mr Eskdale of 21 November 2004, **C-310**.

1179 Mirones II, ¶ 115 (Unofficial translation: "*a hypothetical willing buyer of the Antimony Smelter would discount the costs of closing and remediation of environmental liabilities when estimating the price of the Land. Even a buyer who intends to continue making industrial use of the Land would consider such remediation costs when negotiating its acquisition price, since it knows that its industry will have to adapt to the environmental regulations in force and that it will have to remediate the environmental liabilities.*").

808. SRK has reviewed similar remediation projects requiring treatment of contaminated materials and soil capping to prevent the migration of pollutants and shows that remediation costs are around US$ 44 million (*i.e.*, higher than the value of the Antimony Smelter).[1180]

809. Any willing buyer would consider these remediation costs and significantly reduce the value of the Land.

* * *

810. In light of the foregoing, Architect Mirones reiterates in his Second Expert Report that, once all liabilities of the Land and the cost of dismantling the buildings are considered, a willing buyer would conclude that the Antimony Smelter is a liability that does not have any positive commercial value.[1181]

4.4 Claimant's Valuation Of The Tin Stock Is Incorrect And Grossly Inflated

811. There is no dispute as to the date of valuation of the Tin Stock, which both Parties agree should be 30 April 2010.[1182] The Parties disagreement pertains to the quantity of tin concentrates from the Colquiri Mine temporarily stored at the Antimony Smelter as of 1 May 2010 that comprise the Tin Stock.[1183]

812. Claimant avows – solely on the basis of a letter written by Claimant itself[1184] – that, as of the reversion on 1 May 2010, the Tin Stock that was being temporarily stored at the Antimony Smelter was comprised of 161 tonnes of tin concentrates.[1185] Compass Lexecon takes Claimant's letter at face value and values the Tin Stock at US$ 619,343 as at 30 April 2010.[1186] Compass Lexecon's valuation is incorrect and grossly inflated.

813. In its Statement of the Defence,[1187] Bolivia explained that, on 23 September 2010 (shortly after the reversion of the Antimony Smelter), a notary public and a chemical expert carried out an audit of the Tin Stock and certified that there were 157.6 tonnes of Tin Stock (the

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1180 SRK II, ¶ 105.

1181 Mirones II, Section 7.

1182 Statement of Defence, ¶¶ 910-911; Econ One, Table 1; Reply on Quantum, ¶ 173; Compass Lexecon II, ¶ 81.

1183 Statement of Defence, ¶¶ 910-911; Reply on Quantum, ¶ 173.

1184 Letter from Colquiri SA (Mr Capriles Tejada) to Ministry of Mining (Mr Pimentel Castillo) of 3 May 2010, **C-28**.

1185 Statement of Claim, ¶ 79.

1186 Compass Lexecon II, ¶ 144, Table 12. See also Reply on Quantum, ¶¶ 4, 9(c), 173.

1187 Statement of Defence, ¶ 911.

"**Notarized Tin Stock Report**"). Based on that Notarized Tin Stock Report,[1188] in its First Report, Dr Flores estimated the value of the Tin Stock at US$ 606,264.[1189]

814. In its Reply on Quantum, Claimant argues that correspondence between Colquiri, the Ministry of Mining and Metallurgy and the EMV shortly after the reversion of the Antimony Smelter refers to 161 tonnes of tin concentrates.[1190] Moreover, Claimant alleges that the Notarized Tin Stock Report "*may have accurately recorded the amount of Tin Stock as of 23 September 2010, but it cannot guarantee that the Tin Stock was not reduced in the five months between when it was seized on 1 May 2010 and 23 September 2010*".[1191]

815. Claimant bears the burden of proving the quantify of Tin Stock stored at the Antimony Smelter as of the reversion date and its self-serving speculation that Bolivia may have "*reduced*" the Tin Stock between May and September 2010, as it alleges. Claimant, however, has not established the amount of tin concentrate it was storing at the Antimony Smelter (much less provided *any* evidence demonstrating that Bolivia would have tampered with the Tin Stock). Instead, Claimant imposes a *probatio diabolica* on Bolivia to prove that it did not "*reduce*" the Tin Stock in the months between the reversion and the Notarized Tin Stock Report (*i.e.*, for the State to provide proof that something *did not* happen, which is, by definition, impossible).

816. A mere reading of the two letters Claimant relies upon confirms they do not support Claimant's case:

817. *First*, Claimant's argument is circular: it is Claimant's case that the Tin Stock would be 161 tonnes because Claimant wrote so in a letter. Claimant self-servingly relies on the letter sent on 3 May 2010 by the Executive President of Colquiri S.A. (*i.e.*, an employee of Sinchi Wayra, that is Glencore International) to the Ministry of Mining and Metallurgy stating that "*[e]n la Planta de Vinto Antimonio se encontraban almacenadas en la fecha del decreto mencionado, CIENTO SESENTA Y UNO TONELADAS de concentrado de estaño […]*".[1192] Said letter does not contain any certification or proof of the quantity of Tin Stock being claimed nor does it estimate its value.

1188 Certificate of Verification of Tin Concentrates Deposited in the Warehouse of the Plant of the Vinto Metallurgical Company, **EO-17**.

1189 Econ One, ¶ 140.

1190 Reply on Quantum, ¶ 174.

1191 Reply on Quantum, ¶ 175.

1192 Letter from Colquiri SA (Mr Capriles Tejada) to Ministry of Mining (Mr Pimentel Castillo) of 3 May 2010, **C-28** (Unofficial translation: "*ONE HUNDRED AND SIXTY-ONE TONS of tin concentrate were stored in the Vinto Antimony Smelter on the date of the above-mentioned decree [...].*").

818. *Second*, contrary to Claimant's suggestion, the 5 May 2010 letter from the Ministry of Mining and Metallurgy to the EMV simply informs that "*la Compañía Minera Colquiri nos ha remitido [the 3 May 2010 Colquiri letter], reclamando ciento sesenta y un toneladas de concentrado de estaño que se encontrarían en la planta de Antimonio del Complejo Metalúrgico Vinto recientemente revertida a dominio del Estado*".[1193] In fact, the use of the conditional ("*encontrarían*") confirms that the Ministry of Mining was merely relaying Claimant's position regarding the Tin Stock. This cannot serve neither as an acknowledgement nor as a confirmation by Bolivia of the amount of Tin Stock allegedly stored.

819. Conversely, as explained by Quadrant, the Notarized Tin Stock Report – certifying that there were 157.6 tonnes of tin concentrate in the Antimony Smelter – is more reliable than the correspondence referred to by Claimant.[1194]

820. *Lastly*, even though it not Bolivia's burden, Eng Villavicencio – General Manager of the Tin Smelter at the time – confirms that the EMV did not "*reduce*" the Tin Stock between 1 May 2010 and 23 September 2010:

> *confirmo que no dispusimos del Stock de Estaño y que el acta notariada de verificación de concentrados de septiembre de 2010 refleja el stock existente al momento de la reversión.*[1195]

821. Indeed, it is preposterous to claim that Bolivia could have resorted to the Tin Stock to ensure a flow of tin concentrates for the Tin Smelter. Such an insignificant amount could not possibly ensure the feed of the Tin Smelter's furnaces: the 3.4 tonnes of tin concentrate that Bolivia would have allegedly taken from the Tin Stock represents less than 10% of the concentrates processed at the time by the Tin Stock in a single day.[1196]

822. As a result, Bolivia maintains that the Tin Stock is comprised of 157.6 tonnes of tin concentrate per the Notarized Tin Stock Report and should be valued at US$ 606,264 as at 30 April 2010.[1197]

1193 Letter from Ministry of Mining (Mr Pimentel Castillo) to EMV (Mr Ramiro Villavicencio) of 5 May 2010, **C-29** (Unofficial translation: "*the Compañía Minera Colquiri has sent us [the 3 May 2010 letter], claiming one hundred and sixty one tons of tin concentrate that would be stored in the Antinomy plan of the Complejo Metalúrgico Vinto that was recently reverted to the State*") (emphasis added).

1194 Quadrant II, ¶ 138.

1195 Villavicencio III, ¶ 89 (Unofficial translation: "*I confirm that we did not use the Tin Stock and that the September 2010 notarized audit of the concentrates reflects the existing stock at the time of the reversion.*").

1196 Villavicencio II, ¶ 16; Complejo Metalúrgico Vinto S.A., 2006, Vinto S.A. December 2006 Report (Extracts), **RPA-21**, p. 3.

1197 Quadrant II, ¶ 138.

4.5 The Discount Rate Used By Compass Lexecon To Estimate The NPV Of Vinto And Colquiri Is Unrealistically Low

823. Both Quadrant and Compass Lexecon employ the Capital Asset Pricing Model ("**CAPM**") to build up the discount rates that must apply to the projected cash flows of Colquiri and Vinto.[1198] What the Parties disagree on is the exact discount rate that must apply to each asset, because Compass Lexecon's proposed discount rates for both Colquiri and Vinto remain unrealistically low.

824. For Colquiri, Compass Lexecon estimates a weighted average cost of capital ("**WACC**") of 12.3% and applies it to discount the Asset's projected cash flows up back the valuation date that Claimant originally proposed for Colquiri (*i.e.*, 29 May 2012).[1199] Quadrant has estimated Colquiri's WACC at 22.1%, and discounted its projected cash flows to 19 June 2012,[1200] *i.e.* Colquiri's proper valuation date.[1201]

825. For Vinto, Compass Lexecon estimates a WACC of 15.7% and applies it to discount the Asset's projected cash flows to its valuation date of 8 February 2007.[1202] Quadrant has estimated Vinto's WACC at 28.5% and discounted its projected cash flows also to 8 February 2007.[1203]

826. While the Parties' Experts also disagree on other components of the discount rates for Colquiri and Vinto,[1204] the two main points of contention are that Compass Lexecon has employed an unjustifiably low country risk premium ("**CRP**") (**Section 4.5.1**), and has also not included an illiquidity/size premium (**Section 4.5.2**). Compass Lexecon is wrong on both fronts.

1198 Reply on Quantum, ¶ 142; Quadrant II, ¶ 139.

1199 Reply on Quantum, ¶ 142; Compass Lexecon II, ¶ 83. See also Compass Lexecon II, footnote 6, where Compass Lexecon suggests that, no matter if they used 29 May, 4 June, or 19 June 2012 as the valuation date for Colquiri, "*all else being equal, the impact in damages would be minimal.*" However, Quadrant has explained that this is wrong, by analysing the real impact of the Rosario Agreement on Colquiri's FMV, see Quadrant II, Section III.G

1200 Quadrant II, ¶ 194 and Figure 19; Econ One, ¶ 190 and Table 6.

1201 See Section 2.2.1 above.

1202 Compass Lexecon II, ¶ 83; Reply on Quantum, ¶ 142.

1203 Quadrant II, ¶ 195 and Figure 20; Econ One, ¶ 190 and Table 6.

1204 The Parties' Experts also disagree as to the risk-free rate for Vinto. While Compass Lexecon has wrongly relied on the average yield of the 10-year U.S. Treasury Bond to assess the risk-free rate for both Vinto and Colquiri, Quadrant has instead selected the 20-year U.S. Treasury Bond to asses Vinto's risk-free rate, since that bond's horizon is most closely aligned with Vinto's 20 year cash flow projections (see Quadrant II, ¶¶ 187-188 and Compass Lexecon II, ¶¶ 112-113). Moreover, the Parties' Experts disagree on the method for deriving the appropriate market/equity risk premium because, as Quadrant explains, Compass Lexecon's approach is based on assumptions that are contradicted by the underlying financial data, and rests on inappropriate methods for calculating equity risk premia (see Quadrant II, ¶¶ 189-191 and Compass Lexecon II, ¶¶ 104-111). Finally, the Parties' Experts also employ different methodologies in calculating the cost of debt, with both being acceptable in principle, but, as Quadrant explains, with its approach that relies on Professor Damodaran's calculations remaining the most appropriate (see Quadrant II, ¶¶ 192-193 and Compass Lexecon II, ¶¶ 114-115).

4.5.1 Compass Lexecon's Calculation Of The Country-Risk Premium is Incomplete And Yields Unrealistically Low Results

827. It is undisputed that the discount rate applied to cash flows generated by Colquiri and Vinto must include a CRP that reflects the extra return required by an investor to invest in a company in Bolivia, as opposed to one located in the U.S.[1205]

828. Since its First Report, Quadrant has offered and maintains a realistic CRP, estimated at 13.13% for Vinto, and at 10.52% for Colquiri, which was calculated as the average of two widely-accepted methodologies: (i) the sovereign debt spread adjusted for equity risk; and (ii) the Ibbotson/Morningstar Country Risk Rating Model.[1206]

829. However, Compass Lexecon criticizes Quadrant's approach and instead suggests an unduly low CRP, calculated at 5.21% for Vinto and at 3.70% for Colquiri.[1207] Both Compass Lexecon's criticism of Quadrant's approach, and the arguments in support of its low CRP are unfounded.

830. *First*, Compass Lexecon alleges that Quadrant took the average of two "*unconnected methodologies that yield highly dissonant estimates*," without explaining why.[1208] However, as Quadrant explains, the methodologies it employed are widely-recognized for generating reasonable and stable results.[1209] Besides, it is common practice to employ multiple methodologies to gauge a general consensus, especially when performing valuations where the hypothetical willing buyer and its preferred method of estimating country risk are unknown – in fact, Compass Lexecon has done the same, when forecasting commodity prices.[1210] Thus, Compass Lexecon's criticism of Quadrant's methodological approach to CRP is baseless.

831. *Second*, Compass Lexecon's calculation of Bolivia's CRP is incomplete, as Compass Lexecon's wrongly objects to the corrective application of Quadrant's 1.5 multiplier. Compass Lexecon uses the sovereign debt approach to measure Bolivia's country risk.[1211] As

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1205 Quadrant II, ¶ 157; Compass Lexecon II, ¶ 85.

1206 Quadrant II, ¶ 157; Econ One, ¶¶ 168-169.

1207 Compass Lexecon II, ¶ 88; Compass Lexecon I, ¶¶ 117-120.

1208 Compass Lexecon II, ¶¶ 88-89; Reply on Quantum, ¶ 147.

1209 Quadrant II, ¶ 158; Econ One, ¶¶ 166-175.

1210 Quadrant II, ¶ 158; Compass Lexecon Price Forecasts, **CLEX-30**.

1211 Compass Lexecon II, ¶¶ 86-88; Compass Lexecon I, ¶¶ 117-120.

Quadrant has explained, Compass Lexecon's approach is incomplete, since it does not capture the risk of an equity investment in Bolivia, but only the risk of a sovereign debt default.[1212]

832. Because of this, Compass Lexecon's calculation based on sovereign debt is only the first step in estimating Bolivia's CRP as applicable to an equity investment, which is exactly the situation here (where Claimant claims the value derived from cash flows to the shareholders of Colquiri and Vinto). This must then be followed by a second step, whereby an adjustment is applied to account for the additional risks inherent in the particular country's equity market, which are not captured in the yield spread.[1213] Quadrant has done this, by applying Professor Damodaran global average multiplier of 1.5, so as to convert the measure of risk on sovereign debt to one that captures the risk of an equity investment in Bolivia.[1214]

833. Compass Lexecon objects to this adjustment, alleging that Professor Damodaran only suggested it for "*short-term investments and not for long-term investments, such as Colquiri or Vinto*."[1215] Claimant also cites to the *Rurelec* tribunal's rejection of this 1.5 multiplier on the same grounds.[1216] However, it is simply not true that Professor Damodaran only advocates for the use of the 1.5 multiplier for short-term, but not long-term, investments.

834. As Quadrant explains, Professor Damodaran never rejected the application of a multiplier for long-term investments. To the contrary, as evidenced by his presentations on the topic, he uses the 1.5 multiplier when computing discount rates for long-term equity investments.[1217] Even in the spreadsheet that Compass Lexecon cited to, Professor Damodaran applies the 1.5 multiplier to its CRP estimate for Bolivia, and all other developing countries.[1218]

835. In short, Claimant's and Compass Lexecon's objection to the 1.5 multiplier, but also the *Rurelec* tribunal's related findings, are inconsistent with the methodology actually employed by Professor Damodaran. The use of the 1.5 multiplier is justified and is a necessary

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1212 Quadrant II, ¶ 161; Econ One, ¶¶ 166-167.

1213 Quadrant II, ¶ 161; Econ One, ¶ 167.

1214 Quadrant II, ¶ 162; Econ One, ¶ 167; Aswath Damodaran, "Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2012 Edition," March 14, 2012 of 14 March 2012, **EO-22**, footnote 82.

1215 Compass Lexecon II, ¶ 90.

1216 Reply on Quantum, ¶ 145; *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶¶ 576, 578.

1217 Quadrant II, ¶¶ 163-164 and citations therein.

1218 Compass Lexecon II, ¶ 90 and footnote 169; Damodaran, A. "Country Risk Premium Spreadsheet Calculations", January 2012, **CLEX-52**, Tab "Country premiums," Cell A7 ("*In this spreadsheet, I have used the global average of equity to bond market volatility of 1.5 to estimate the country equity risk premium.*"). As Quadrant explains, Professor Damodaran estimates a country risk premium for Bolivia of 6.0% as of 2012 (that is, a default spread of 400 basis points × 1.5 = 6%) which is in line with Quadrant's estimate under this methodology, 5.52% (that is, a default spread of 3.70% × 1.5 = 5.54%), see Quadrant II, ¶ 164.

correction to Compass Lexecon's CRP estimate, so that the sovereign default spread can be adjusted to capture the risk of an equity investment in Bolivia, and thus be used for calculating a discount rate on equity investments.

836. *Third*, Claimant's criticism of the Ibbotson/Morningstar Country Risk Model is also flawed. The Ibbotson/Morningstar Country Risk Model is a widely-employed and thorough study based on country credit risk rating, which presents notable advantages compared to other models, including that it (i) covers many countries, (ii) consistently produces reasonable results, and (iii) produces stable results over time.[1219] Moreover, as Quadrant explains, Compass Lexecon's allegations as to the alleged lack of transparency of this model or a bias toward specific world regions,[1220] are entirely unfounded.[1221]

837. Compass Lexecon also posits that under the Ibbotson/Morningstar Model, country ratings "*are also influenced by expropriation and currency risks*," but that these risks should not be included in the cost of capital for Colquiri and Vinto.[1222] However, as Quadrant explains, the expropriation and currency risks alluded to by Compass Lexecon are not specific to the asset being valued, but are general in nature, and thus reflect the market examined.[1223] In other words, the types of general expropriation and currency risks that the Ibbotson/Morningstar Model reflects are precisely the type of "*political, regulatory, and macroeconomic risks*," which Claimant agrees that country risk premia should reflect and that any willing buyer would consider.[1224]

838. Tribunals have also confirmed that these types of general, yet country-specific, risks have to be accounted for in the country risk premium, since any hypothetical buyer would have taken them into consideration.[1225] As explained by the *Tidewater* tribunal:

> *the country risk premium quantifies the general risks, including political risks, of doing business in the particular country, as they applied on that date and as they*

1219 Quadrant II, ¶ 167.

1220 Reply on Quantum, ¶ 146; Compass Lexecon II, ¶¶ 92-93.

1221 Quadrant II, ¶¶ 170-172. See also Quadrant II, ¶¶ 168-177, for Quadrant's response to the rest of Compass Lexecon's unfounded criticism of the Ibbotson/Morningstar Country Risk Model.

1222 Compass Lexecon II, ¶ 93.

1223 Quadrant II, ¶ 173.

1224 Reply on Quantum, ¶ 144 ("*The purpose of the country-risk premium is to account for the political, regulatory, and macroeconomic risks that Colquiri and Vinto might have been exposed to due to their location in Bolivia as opposed to a more stable jurisdiction, such as the United States*."); Compass Lexecon II, ¶ 85.

1225 See, indicatively, *Tidewater Investment SRL and Tidewater Caribe, C.A. v. The Bolivarian Republic of Venezuela*, ICSID Case No. ARB/10/5, Award of 13 March 2015, **RLA-60**, ¶¶ 186-187; RREEF Infrastructure (GP) Limited and RREEF Pan-European Infrastructure Two Lux Sàrl v Kingdom of Spain (ICSID Case No ARB/13/30) Decision on Responsibility and on the Principles of Quantum , **CLA-257**, ¶ 579.

> *might then reasonably have been expected to affect the prospects, and thus the value to be ascribed to the likely cash flow of the business going forward*
>
> *The inclusion of a country risk premium is a very common feature of tribunals' calculation of compensation, since, as one tribunal observed 'the fundamental issue of country risk [is] obvious to the least sophisticated businessman.'*[1226]

839. *Fourth*, Compass Lexecon's assertion that Vinto and Colquiri were not 100% exposed to Bolivian risk is wrong.[1227] Compass Lexecon posits that "*given that the projects derive most of their revenues from exports and given that the outputs are valued in US dollars, the projects are not 100% exposed to Bolivian general country risk as compared to*" companies targeting the Bolivian market.[1228] As Quadrant explains, this is incorrect, since "*a company can face substantial country risk exposure, even if it derives its revenues outside that country*."[1229]

840. Particularly for the Assets in question, this could not logically be otherwise. As Quadrant points out, no matter where Vinto or Colquiri export their output to, as they are immoveable assets located in Bolivia, they are unavoidably exposed to Bolivian country risk, including risks of taxation, governmental regulation or risks of labour unrest and stoppages.[1230] As Quadrant adds, the extractive industries are globally exposed to above-average country risk,[1231] and this is particularly true with regards to the Bolivian mining sector, given its crucial economic, political and social role.[1232] Thus, if anything, Vinto and Colquiri would be more, not less, exposed to Bolivian country risk, than the average company operating in Bolivia.

841. In the end, however, Compass Lexecon's unfounded suggestion is devoid of practical significance for the Assets' valuation. This is because, despite its initial suggestion, Compass Lexecon eventually admits that it does not have "*robust quantitative metrics to compute the size of a lambda factor for Colquiri and Vinto*,"[1233] and end ups treating the Assets as having average exposure to country risk.[1234] Quadrant agrees that this is the lowest reasonable

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1226 *Tidewater Investment SRL and Tidewater Caribe, C.A. v. The Bolivarian Republic of Venezuela*, ICSID Case No. ARB/10/5, Award of 13 March 2015, **RLA-60**, ¶¶ 186-187 (emphasis added), citing *Himpurna California Energy Ltd. v. PT. (Persero) Perusahaan Listruik Negara*, UNCITRAL, Award of 4 May 1999, **RLA-213**, ¶ 364.

1227 Compass Lexecon II, ¶ 96 and footnote 177.

1228 Compass Lexecon II, ¶ 96.

1229 Quadrant II, ¶ 182.

1230 Quadrant II, ¶¶ 182-184.

1231 Quadrant II, ¶ 183.

1232 Quadrant II, ¶ 184.

1233 Compass Lexecon II, ¶ 96.

1234 Compass Lexecon II, ¶ 96.

assumption that can be made, and that any lower assumption would underestimate Vinto's and Colquiri's exposure to Bolivian country risk.[1235]

842. *Finally*, in its Reply on Quantum, Claimant offers its alleged response to an argument that Bolivia never made in relation to the country risk premia applicable to either Vinto or Colquiri. Claimant would have "*Bolivia insinuate[] that the Tribunal should consider the risk of expropriation without compensation as a component of the country-risk premium*," only to then allege that this would be against international law, and that even Quadrant does not endorse this.[1236] But Bolivia never made such argument, or insinuated what Claimant suggests.

843. None of the four factual circumstances that Claimant refers to in its constructed argument were ever used by Bolivia concerning what country risk premia should account for. What Bolivia has actually argued is that the following four facts were all publicly known before Colquiri's and Vinto's reversions: (i) that Glencore had willingly entered into negotiations with Bolivia about transitioning into a shared-risk agreement for Colquiri;[1237] (ii) that Glencore had willingly offered the Rosario Agreement to the *cooperativistas* through the Rosario Agreement of 7 June 2012;[1238] (iii) that the Mine had historically faced problems with the *cooperativistas*, which, by June 2012, had reached levels of a violent social conflict;[1239] and (iv) that the State was considering reverting Vinto since 2005, due to the highly irregular circumstances of Vinto's privatisation and eventual sale to Glencore by Bolivia's fleeing ex-President Sánchez de Lozada.[1240]

844. Bolivia's actual argument is that these known facts would have influenced the market value that a willing and informed buyer would have considered fair for Colquiri or Vinto, in the context of a hypothetical transaction immediately before their taking, which an FMV

1235 Quadrant II, ¶ 186.

1236 Reply on Quantum, ¶ 148.

1237 Statement of Defence, ¶¶ 783-784 ("*Compass Lexecon ignores that, when assessing the FMV of Colquiri, any willing buyer would have considered […] [f]irst, the shared-risk agreement that Claimant was negotiating with the State (pursuant to the requirements of the 2009 Constitution) when the Mine Lease was reverted*") (emphasis added).

1238 Statement of Defence, ¶¶ 783, 785 ("*Compass Lexecon ignores that, when assessing the FMV of Colquiri, any willing buyer would have considered […] [s]econd, the Rosario Agreement, signed on 7 June 2012, whereby Glencore International (through Sinchi Wayra and Colquiri) willingly assigned the Rosario vein to the Cooperativa 26 de Febrero.*") (emphasis added).

1239 Statement of Defence, ¶¶ 783, 786 ("*Compass Lexecon ignores that, when assessing the FMV of Colquiri, any willing buyer would have considered […] [t]hird, the social conflicts and violence existing in the Colquiri area (described in section 2.6.3 above), and the resulting risk of State interventions*") (emphasis added).

1240 Statement of Defence, ¶¶ 848-850 ("*Compass Lexecon appears to ignore that the FMV standard requires that the Tin Smelter's valuation be premised on a reasonable, well-informed, knowledgeable and prudent willing buyer. As explained in section 2.5.4 above, as of 2005, it was already publicly known that the State was considering regaining ownership of the Tin Smelter. […]. Any willing buyer in 2007 would have, therefore, factored in this risk when estimating the FMV of the Tin Smelter.*") (emphasis added).

valuation requires.[1241] Tellingly, Glencore's own due diligence before acquiring the Assets had flagged both the complications associated with Sánchez de Lozada and the chronic tensions with the *cooperativistas* as key risks of the envisaged transaction and the Assets' operations.[1242]

845. These facts are risks that any willing buyer would also consider, but they are unrelated to Bolivia's general country risk, and Bolivia never invoked them concerning the CRP that Colquiri's or Vinto's discount rates should contain. This is why, as Claimant rightly points out,[1243] Quadrant did not address these facts in its CRP analysis – because they were addressed elsewhere, in the sections of Bolivia's submissions and Quadrant's Reports dealing with Claimant's unrealistic valuations that do not account for a willing and knowledgeable buyer's FMV of the Assets.[1244] Accordingly, whether Claimant's invoked authorities support its assertions or not,[1245] is frankly irrelevant, since Claimant's assertions are in response to an argument that Bolivia never made.

846. In conclusion, Compass Lexecon's methodology that results in unduly low country risk premia for both Vinto and Colquiri is flawed and should thus be rejected. Moreover, Claimant's and Compass Lexecon's arguments against Quadrant's approach are meritless. Accordingly, the Tribunals should include in the Assets' discount rates the CRP proposed by Quadrant, *i.e.* a CRP of 13.13% for Vinto, and of 10.52% for Colquiri.

4.5.2 Compass Lexecon's Exclusion Of The Illiquidity/Size Premium Results In Discount Rates That Are Unfit For Assets Like Vinto And Colquiri

847. The Parties' Experts disagree on whether an illiquidity/size premium should be included in the discount rates for Vinto and Colquiri. Compass Lexecon insisting that this is inappropriate,

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1241 Statement of Defence, ¶¶ 783, 848-850. See also Sections 4.1.2 and 4.2.3 above.

1242 Glencore inter office correspondence from Mr Eskdale to Mr Strothotte and Mr Glasenberg of 20 October 2004, **C-196**, p. 5 ("*Goni was effectively forced out of Bolivia in October 2003 following a wave of popular unrest. We understand that legal proceedings are currently being prepared against him personally by the Bolivian Congress. Whilst the Minera group is a thriving, legitimate business in its own right, the shares of which are held offshore and which legally can be freely bought and sold, there is clearly a risk that Goni's personal issues might have a bearing on the group's sale. We need to be extremely cautious both in terms of the warranties and indemnities given in any share purchase agreement and also in the handling and presentation of the transition in country*.") (emphasis added); [redacted]

1243 Reply on Quantum, ¶ 148.

1244 See Sections 4.1.2 and 4.2.3 above; Quadrant II, ¶¶ 143-145, Section III.G; Econ One, ¶¶ 78-86, ¶¶ 93-94.

1245 Reply on Quantum, ¶ 148 and footnote 380.

even though Quadrant has demonstrated why this adjustment is necessary, in light of the CAPM's shortcomings in accounting for Vinto's and Colquiri's characteristics.

848. As explained in Quadrant's First Report, the CAPM is meant to measure the cost of capital for large, publicly-traded companies, and thus presents considerable shortcomings when applied to smaller, or non-publicly traded, illiquid physical assets, like Vinto and Colquiri.[1246] Financial literature, valuation practitioners and arbitral tribunals alike agree that, when valuing small or illiquid assets, the rates of return predicted through CAPM need to then be adjusted to make up for these additional costs of capital that the CAPM fails to account for.[1247]

849. This necessary adjustment is typically made by including what has been called a 'size', an 'illiquidity' or, more generally, an 'additional risk' premium in the discount rate of the assets that are valued.[1248] Contrary to Compass Lexecon, Quadrant's analysis accounts for this needed adjustment through an additional illiquidity/size premium of 3.89% for Colquiri and of 3.95% for Vinto, calculated on the basis of the Ibbotson/Morningstar classification.[1249]

850. Claimant insist that an adjustment that makes up for the CAPM's shortcomings would be "*incorrect*" and "*unjustified*".[1250] But Claimant's position is wrong.

851. *First*, Claimant alleges that the use of a 'size premium' is not standard practice in international finance, and thus, that it was "*not surprising*" when the *Rurelec* tribunal rejected it.[1251] However, as Quadrant underlined already from its First Report, despite often labelled a 'size premium,' the rationale behind it "*is broader than this label suggests*," as it also makes up for

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1246 Econ One, ¶¶ 176-182.

1247 Quadrant II, ¶¶ 148, 152-156; Econ One, ¶¶ 177, 179, 183 and citations therein. See also *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 600 ("*The shares of non-listed companies, like EGSA, should be considered illiquid. Hence, while they are not subject to the vagaries and volatility of stock markets, they should attract a significant illiquidity premium*"); *Quiborax SA and Non Metallic Minerals SA v Plurinational State of Bolivia* (ICSID Case No ARB/06/2) Award of 16 September 2015, **CLA-127**, ¶ 493; *Magyar Farming Company Ltd and others v. Hungary*, ICSID Case No. ARB/17/27, Award of 13 November 2019, **RLA-206**, ¶ 413; *RREEF Infrastructure (G.P.) Limited and RREEF Pan-European Infrastructure Two Lux Sàrl v. Kingdom of Spain*, ICSID Case No. ARB/13/30, Award of 11 December 2019, **RLA-214**, ¶ 34 ("*To calculate the value of the investment, it is normal to add an 'illiquidity discount' which adjusts the value of the company on the grounds that it is not, or only slightly, liquid (because it cannot be easily sold).*").

1248 *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 594 ("*there are compelling reasons to add an additional risk premium of 4.5% to EGSA's required cost of equity, which, while similar in its effects to Econ One's 'size premium', might be more appropriately called an 'illiquidity premium', or better yet an 'additional risk premium', as it also encompasses some aspects that the Tribunal considers relevant among those discussed by the Parties when addressing the multiplier issue*") (emphasis added).

1249 Quadrant II, ¶ 146; Econ One, ¶ 177.

1250 Reply on Quantum, Section III.3(b); Compass Lexecon II, Section III.2.

1251 Reply on Quantum, ¶ 150.

other "*[c]onsiderations such as measurement limitations with the CAPM, illiquidity, diversification, and indirect costs*," which the CAPM fails to properly account for.[1252]

852. Putting substance over labelling shows that Claimant's invocation of the *Rurelec* tribunal is misleading. Immediately before the paragraphs cited by Claimant, said tribunal found that

> *there are compelling reasons to add an additional risk premium of 4.5% to EGSA's required cost of equity, which, while similar in its effects to Econ One's 'size premium', might be more appropriately called an 'illiquidity premium', or better yet an 'additional risk premium', as it also encompasses some aspects that the Tribunal considers relevant among those discussed by the Parties when addressing the multiplier issue.*[1253]

853. The *Rurelec* tribunal (charged with estimating the FMV of the largest private energy generation company in Bolivia, EGSA) then quoted Professor Damodaran who notes that, despite the fact that "*we should be using higher discount rates for cash flows on an illiquid investment than for cash flows on a liquid investment*," there is actually "*little in these models [like CAPM] that allows for illiquidity*."[1254] The *Rurelec* tribunal then adopted Professor Damodaran's solution to

> *[a]dd a constant illiquidity premium to the discount rate for all illiquid assets to reflect the higher returns earned historically by less liquid (but still traded) investments, relative to the rest of the market. This is akin to another very common adjustment made to discount rates in practice, which is the small stock premium. The costs of equity for smaller companies are often augmented by 3-3.5% reflecting the excess returns earned by smaller cap companies over very long periods. […] Practitioners attribute all or a significant portion of the small stock premium reported by Ibbotson Associates to illiquidity and add it on as an illiquidity premium.*[1255]

854. Accordingly, Claimant's attempt to isolate and attack the 'size' label of Quadrant's additional illiquidity/size premium finds no support in the *Rurelec* tribunal's reasoning. The *Rurelec* tribunal confirmed that 'size' or 'illiquidity' premia serve similar corrective functions, and eventually applied an "*additional risk premium of 4.5% to EGSA's required cost of equity*,"[1256] which is even higher than Quadrant's illiquidity/size premia of 3.89% for Colquiri and of

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1252 Quadrant II, ¶ 148; Econ One, ¶ 183.

1253 *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 594 (emphasis added).

1254 Aswath Damodaran, "Comatose Markets: What If Liquidity Is Not The Norm?", Stern School of Business, December 2010, **R-526**, p. 53 (emphasis added); *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 598.

1255 Aswath Damodaran, "Comatose Markets: What If Liquidity Is Not The Norm?", Stern School of Business, December 2010, **R-526**, p. 55 (emphasis added); *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶¶ 598-600.

1256 *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 594 (emphasis added).

3.95% for Vinto. Moreover, Claimant's arguments also find no not support in finance practices, where, as put in *Rurelec*, practitioners often employ "*[t]he same historical data [relied] on for the small stock premium*" in order to produce "*an estimate of an 'illiquidity premium'*,"[1257] and apply this to make up for the CAPM's shortcomings.

855. *Second*, Claimant alleged that using an additional illiquidity/size premium would be duplicative to the application of a CRP.[1258] However, as Quadrant explains, it is wrong to conflate the CRP and the additional risk premium and to assume an overlap between them.[1259] CRP and the additional illiquidity/size premium perform entirely different functions, as CRP does not account for a company's individual characteristics, which is what the additional risk premium does.[1260] The inclusion of the CRP simply does not account for the company-specific characteristics of Vinto and Colquiri that make them different from the large publicly-traded companies targeted by the CAPM.

856. *Third*, Claimant posits that, even if a 'size' premium were generally applicable, it should not apply to Vinto or Colquiri, which are not small companies compared to others in Bolivia.[1261] However, as Quadrant explains, the determination of the discount rate, and thus also of the illiquidity/size premium, is made from the perspective of a hypothetical buyer who evaluates investment opportunities globally, not only in Bolivia.[1262] Thus, the relative size of Vinto and Colquiri in Bolivia is not relevant for determining if to include an illiquidity/size premium.

857. Moreover, per Compass Lexecon's description, "*the projects derive most of their revenues from exports, and given that the outputs are valued in US dollars, the projects are not 100% exposed to Bolivian general country risk as compared to*" Bolivian companies.[1263] Claimant cannot have it both ways, by first invoking Vinto's and Colquiri's global operations to shield itself from Bolivian country risk,[1264] and then forgetting these global operations and asking that Vinto and Colquiri be compared only to Bolivian companies, to also avoid the additional illiquidity/size premium. Vinto's and Colquiri's global operations are precisely what make

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1257 Aswath Damodaran, "Comatose Markets: What If Liquidity Is Not The Norm?", Stern School of Business, December 2010, **R-526**, p. 55; *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 599; Quadrant II, ¶ 151 ("*As Ibbotson/Morningstar explain, since small firms tend to be illiquid, the size premium represents a proxy for the illiquidity premium*.").

1258 Reply on Quantum, ¶ 150.

1259 Quadrant II, ¶ 149.

1260 Quadrant II, ¶¶ 149-150.

1261 Reply on Quantum, ¶ 150.

1262 Quadrant II, ¶ 147.

1263 Compass Lexecon II, ¶ 96.

1264 See also Section 4.5.1 above.

them comparable to companies in the U.S. or elsewhere, for a hypothetical buyer assessing opportunities globally, and thus, Vinto and Colquiri are rightly compared to U.S. assets.

858. *Fourth*, Claimant is wrong that the application of an illiquidity/size premium would "*run[] contrary to the fair market value principle*," which requires a hypothetical transaction where the seller would be under "*no compulsion to sell*."[1265] As Quadrant explains, Claimant's position conflates the impact of illiquidity on value with that of a distressed sale.[1266] The illiquidity premium does not measure the value lost in a rushed sale, but the additional risks inherent with the sale of a privately-held Bolivian smelter or mine compared to the sale of a hypothetical identical publicly-traded Bolivian smelter or mine.[1267] Thus, applying an illiquidity premium to Vinto and Colquiri would not assume a distressed sale of the Assets, but would only capture the illiquidity risks inherent in these two physical and non-publicly traded Assets, which the CAPM fails to account for.

859. *Fifth*, Claimant alleges that, in any event, there were no liquidity risks associated with Vinto or Colquiri, since, between 2000 and 2005, "*the Colquiri Lease and Tin Smelter changed hands two and three times, respectively*," supposedly showing that it would not "*be difficult to find potential buyers for Colquiri and Vinto*."[1268] This is disingenuous. As Bolivia has explained at length, all these transactions that Claimant now invokes as proof of the Assets' alleged liquidity were far from the FMV benchmark of 'an arm's length transaction between a willing and informed buyer and a willing seller with no compulsion to sell.'

860. The first of the three transactions that Claimant counts for Vinto was its privatization and sale to Allied Deals in 1999-2000. For Colquiri, the first of the two transactions counted was its privatization and sale to former President Sánchez de Lozada in 1999. Both privatisations were highly irregular, and far from any FMV benchmark transaction. For Vinto, Allied Deals only paid US$ 14 million and ended up also receiving items not calculated in Vinto's purchase price, which, on their own, were worth more than US$ 16 million – meaning that Allied Deals ended up being paid to acquire Vinto.[1269] Colquiri's privatization was also riddled with irregularities, ending up in an unduly low offer by Sánchez de Lozada's companies, which

1265 Reply on Quantum, ¶ 151; Compass Lexecon II, ¶¶ 100-101.

1266 Quadrant II, ¶ 151.

1267 Quadrant II, ¶ 151.

1268 Reply on Quantum, ¶ 151 and footnote 390.

1269 Rejoinder on the Merits, ¶ 111; Statement of Defence, ¶¶ 74-77.

pales in comparison to the alleged FMV that Claimant seeks for the Mine in these proceedings.[1270]

861. The second transaction counted by Claimant for Vinto is its 2002 sale from Allied Deals to Sánchez de Lozada's COMSUR for US$ 6 million. However, in Mr Eskdale's own words at the Hearing, the sale of "*the Asset, the 6 million number, was in the context of a forced liquidation of the Company [Allied Deals] that we talked about earlier, so that brings with it distressed Seller connotations […]*,"[1271] and thus is nowhere close to an FMV sale proving Vinto's liquidity.

862. The third transaction that Claimant counts for Vinto, and the second for Colquiri, is Glencore's 2005 acquisition of the two Assets from Sánchez de Lozada. This transaction was also conducted under irregular, highly secretive and non-transparent circumstances, while Sánchez de Lozada had by then fled Bolivia.[1272] This sale of the Assets to Glencore does not serve as proof that it would not "*be difficult to find potential buyers for Colquiri and Vinto*," as Claimant now posits.[1273]

863. In short, despite Claimant's assertions, Colquiri and Vinto are small and illiquid, non-publicly traded assets and must be valued as such. Compass Lexecon's calculations, which omit the illiquidity/size premium, understate the true cost of capital for Vinto and Colquiri, and would overcompensate Claimant, as if Vinto and Colquiri were large and publicly traded companies, even though they are not. To avoid this outcome, Quadrant's additional premium of 3.89% for Colquiri, and 3.95% for Vinto must be included in the discount rates of both Assets.

* * *

864. In conclusion, Claimant's Reply and their experts' new reports only confirm that Claimant's valuations of the assets remain flawed and grossly inflated, and should thus be disregarded.

865. This conclusion is not altered by Claimant's use of the market multiples method as an alleged 'sanity check' to "*corroborate the results of the DCFs […] for Colquiri and Vinto*."[1274]

866. As Quadrant explains, Compass Lexecon's use of the market multiples approach is unsound and fails to support its conclusions, particularly since Compass Lexecon has failed to identify

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1270 Rejoinder on the Merits, ¶ 95; Statement of Defence, ¶¶ 58, 336 and generally, Section 2.3.1.

1271 Transcript of the Hearing on the Merits, Day 1 (English), P276:L4-7 (Eskdale, Cross) (emphasis added).

1272 Rejoinder on the Merits, Section 2.5.3; Statement of Defence, ¶¶ 120-128.

1273 Reply on Quantum, ¶ 151 and footnote 390.

1274 Reply on Quantum, ¶ 152; Compass Lexecon II, ¶ 160.

companies that are sufficiently comparable to Vinto or Colquiri.[1275] Claimant attempts to defend Compass Lexecon's flawed methodology, by citing the *Crystallex* tribunal as allegedly suggesting that it need not find identical companies for its comparisons, since it is "*acceptable to use broad samples of companies from the same sector*."[1276] But this attempt is unavailing.

867. On the one hand, neither Bolivia nor Quadrant ever suggested that Claimant's task would be to identify a company identical to Vinto or Colquiri. Bolivia's position has simply been that, as financial literature requires, in order to carry out a reliable market multiples comparison, "*the trick […] is selecting truly comparable firms*."[1277] The *Crystallex* tribunal actually stands for the same proposition, underlining that the market multiples approach may be useful but only "*provided it is correctly applied and, especially, if appropriate comparables are used*."[1278]

868. On the other hand, as Quadrant has explained, Compass Lexecon's market multiples approach fails to offer any reliable valuation results, as it does not meet even the basic requirements of relying on "*appropriate comparables*" that are "*sufficiently similar*" to Vinto or Colquiri.[1279]

869. It is telling that in *South American Silver*, a case also involving mining assets in Bolivia and where Claimant's mining expert, RPA, had also appeared as the investor's mining expert, RPA had provided a list of transactions involving comparable mineral properties on which the investor's quantum expert based its market multiples methodology.[1280] In this case, however, no list of comparable mineral properties was provided by RPA, or by Compass Lexecon – who would, in any case, not be the appropriate expert to produce a list of mineral properties,

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1275 Econ One, Annex I. See also *Crystallex International Corporation v Bolivarian Republic of Venezuela* (ICSID Case No ARB(AF)/11/2) Award of 4 April 2016, **CLA-130**, ¶ 901; *ConocoPhillips Petrozuata B.V. and others v. Bolivarian Republic of Venezuela*, ICSID Case No ARB/07/30, Award of 8 March 2019, **RLA-203**, ¶ 898.

1276 Reply on Quantum, ¶ 154.

1277 Simon Z. Benninga and Oded H. Sarig, Corporate Finance: A Valuation Approach, (NY: The McGraw-Hill Companies, Inc., 1997) of 1 January 1997, **EO-41**, pp. 305-306 (emphasis in the original); Quadrant II, Annex B, ¶ 220.

1278 *Crystallex International Corporation v Bolivarian Republic of Venezuela* (ICSID Case No ARB(AF)/11/2) Award of 4 April 2016, **CLA-130**, ¶ 901 (emphasis added). See also *ConocoPhillips Petrozuata B.V. and others v. Bolivarian Republic of Venezuela*, ICSID Case No ARB/07/30, Award of 8 March 2019, **RLA-203**, ¶ 898 ("*The 'market multiples' approach […] is applied by (1) identifying publicly-traded firms that are sufficiently similar to the target enterprise, (2) computing a ratio that expresses the firm's value to some relevant variable (e.g. earnings, production, proved reserves), and (3) applying the observed multiple to the variable (in this case reserves) to determine its value. […] If the selected public firms are sufficiently similar to the target enterprise, it is possible to draw an inference as to the probable value of the target based on an industry appropriate multiple*.") (emphasis added).

1279 Quadrant II, Annex B, ¶ 221.

1280 *South American Silver Limited v Plurinational State of Bolivia* (PCA Case No. 2013-15), Award of 22 November 2018, **CLA-252**, ¶¶ 803, 832.

as it is not a mining expert like RTA. To the contrary, as Quadrant had pointed out in its First Report, Compass Lexecon does not provide any direct comparison of companies at all.[1281]

870. Compass Lexecon has openly admitted that it "*did not identify any particular company which is directly comparable to Colquiri or Vinto.*"[1282] Having found no appropriate comparables, Compass Lexecon resorts to pulling the Enterprise Value/EBITDA ratio for all companies under the headings "*Diversified Metals & Mining*" and "*Smelting and Refining of Diversified Metals (Primary)*" from Bloomberg.[1283] But this is unavailing. When Compass Lexecon used the exact same approach in *ConocoPhillips,* the tribunal flatly rejected it as "*hypothetical [and] rather speculative*" and unable to yield "*any conclusions concrete enough to be applicable to the Projects in the instant case*."[1284] This Tribunal should do the same.

871. In short, given that Compass Lexecon acknowledges "*the limitations of the data*" it has employed, "*in that there are no directly comparable assets*,"[1285] there is limited utility (if any) for its market multiples approach to yield any concrete results that could serve even as a 'sanity check' to its grossly inflated valuation.[1286]

5. THE REPLY CONFIRMS THAT CLAIMANT'S CLAIM FOR INTEREST IS GROSSLY INFLATED

872. Claimant alleges it is "*entitled to pre and post-award interest at a rate at least as high as the rate required by Article V of the Treaty*."[1287] In Claimant's submission, that rate would be equivalent – for each of the Assets – to "*the rates published by the Central Bank of Bolivia for commercial loans denominated in US dollars granted by banks to corporations in Bolivia*,"[1288] *i.e.*, (i) 8.6% for the Tin Smelter claim (from 8 February 2007); (ii) 6.13% for the

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1281 Econ One, Annex I, ¶ 202.

1282 Compass Lexecon II, ¶ 162; Compass Lexecon I, ¶¶ 127-128.

1283 Econ One, Annex I, ¶ 202.

1284 *ConocoPhillips Petrozuata B.V. and others v. Bolivarian Republic of Venezuela*, ICSID Case No ARB/07/30, Award of 8 March 2019, **RLA-203**, ¶¶ 900-901 ("*The experts accept that they did not identify any particular transaction that could be considered directly comparable in all material respects to the Projects. Therefore, if no reasonable comparison can be derived from the multiple comparisons and analysis of a large number of oil production sites worldwide, what is the purpose of such an exercise if it does not lead to concrete results in respect of the Projects at issue in the instant case? Such comparisons may show differences between extremes where discount rates may be discovered. Yet, this does not lead to any concrete result. Similarly, it is hypothetical or rather speculative to conclude from a comparison to average cost of debt of supposedly comparable E&P companies located in China, Russia, Kazakhstan, Colombia and Brazil, as compiled by the U.S. company Bloomberg, that the Projects' cost of debt was 7.31% as of June, and 6.06% as of December 2016, when data must have been available from the Projects' accounts at least for the historical period.*") (emphasis added).

1285 Compass Lexecon II, ¶ 163.

1286 Quadrant II, Annex B; Econ One, Annex I.

1287 Reply on Quantum, ¶ 176.

1288 Reply on Quantum, ¶ 177.

Tin Stock claim (from 30 April 2010); (iii) 6.4% for the Colquiri Mine Lease claim (from 29 May 2012); and (iv) 6.7% for the Antimony Smelter claim (from 22 January 2020).[1289]

873. Claimant's updated claim for interest (worth as much as US$ 338.6 million, as of 22 January 2020) now represents 43.5% of its total damage claim,[1290] up almost 10% from the portion it represented at the time of the Statement of Claim (34%).[1291] Specifically:

- for the Tin Smelter, Claimant's interest claim is more than twice the amount of the reparation it seeks in respect of such asset;[1292]
- for the Tin Stock, Claimant's interest claim amounts to 80% of the corresponding reparation claimed;[1293]
- for the Mine Lease, Claimant's interest claim amounts to 60% of the corresponding reparation.[1294]

874. [redacted][1295]

[redacted].[1296]

1289 Reply on Quantum, ¶ 178.

1290 Claimant's total claim for damages is US$ 778.1 million (as of 22 January 2020). Reply on Quantum, table at ¶ 47.

1291 Statement of Defence, ¶ 913.

1292 Claimant valuates its damages with respect to the Tin Smelter as of US$ 56 million (net of taxes), and claims US$ 106.5 million as interest. Compass Lexecon II, ¶ 145.

1293 Claimant valuates its damages with respect to the Tin Stock as of US$ 0.6 million (net of taxes), and claims US$ 0.5 million as interest. Compass Lexecon II, ¶ 145.

1294 Claimant valuates its damages with respect to the Mine Lease as of US$ 381.1 million (net of taxes), and claims US$ 231.6 million as interest. Compass Lexecon II, ¶ 145.

1295 [redacted]

1296 [redacted]

875. [redacted][1297]

876. Claimant's sizeable interest claim is the result of an unduly high interest rate (**Section 5.1**), improperly compounded annually (**Section 5.2**), over (i) almost 10 years for the Tin Smelter, (ii) 7 years for the Antimony Smelter and the Tin Stock, and (iii) more than 5 years for the Mine Lease.[1298]

5.1 Were The Tribunal To Award Interest To Claimant (*Quod Non*), It Should Apply A Risk-Free Interest Rate To Avoid Overcompensation Or, At Most, Award Interest At The US LIBOR + 1% Rate

877. To avoid Claimant's unjust enrichment, prohibited by international law, the Tribunal should, at most, award interest at a risk-free rate, equivalent to the 6-month or 1 year yield of U.S. Treasury bills (**Section 5.1.1**). Alternatively, if, *par impossible*, the Tribunal were minded to compensate Claimant for some undefined risk subsequent to the reversion of the Assets, the applicable rate would be, at most, equal to US LIBOR + 1% (**Section 5.1.2**).

5.1.1 Interest In This Case Should Be At The Risk-Free Rate To Avoid Claimant's Unjust Enrichment

878. Claimant argues that the standard of compensation applicable in this case is that set forth under customary international law (*i.e.*, full reparation), and not that contained in Article V of the Treaty. In Claimant's words, "*the treaty standard of compensation for lawful expropriation does not govern compensation for breaches of the treaty.*"[1299] Nonetheless, Claimant contends that Article V ("*Expropriation*") – and not customary international law – governs its interest claim[1300] (though it never bothers to explain the contradiction between the two arguments[1301]). For ease of reference, Article V reads as follows:

> *[s]uch compensation [for expropriation] shall amount to the market value of the investment expropriated immediately before the expropriation or before the impending expropriation became public knowledge, whichever is the earlier, shall include interest at a normal commercial or legal rate, whichever is applicable in*

1297 [redacted]

1298 Rejoinder on the Merits, ¶¶ 352-354; Statement of Defence, ¶ 232.

1299 Reply on Quantum, ¶ 20.

1300 Reply on Quantum, ¶ 176; Statement of Claim, ¶ 290.

1301 Throughout the Reply on Quantum, Claimant also adopts an inconsistent approach towards the application of Article V itself. In its claim for damages related to the Antimony Smelter, Claimant rejects that "*compensation shall amount to the market value of the investment expropriated immediately before the expropriation,*" *i.e.*, it rejects the text of the Treaty. Claimant asserts that, for this Asset, compensation should amount to its FMV on the date of the award. Reply on Quantum, ¶¶ 158-160.

> *the territory of the expropriating Contracting Party, until the date of payment, shall be made without delay, be effectively realizable and be freely transferable.*[1302]

879. The applicability of Article V of the Treaty to Claimant's interest claim is not in dispute between the Parties. But the Parties disagree on the precise rate of interest which should be applied further to this provision. Whilst Bolivia has explained that the applicable rate is a risk-free rate (equivalent to the 6-month or 1 year yield of the U.S. Treasury bills),[1303] Claimant insists that the "*rates published by the Central Bank of Bolivia for commercial loans denominated in US dollars granted by banks to corporations in Bolivia*"[1304] should be applied instead. Thus, whilst Bolivia requests the application of the six-month or the one-year U.S. Treasury Bill rates, Claimant would have the Tribunal apply rates of 8.6% for the Tin Smelter claim, 6.1% for the Tin Stock claim, 6.4% for the Mine Lease claim, and 6.7% for the Antimony Smelter claim.[1305]

880. Claimant develops its position on interest – a claim for over US$ 338.6 million – over no more than four of the 120 pages of its Reply on Quantum. In any event, Claimant's position is incorrect, for the following five reasons:

881. *First*, Claimant itself admits that the interest rates it claims "*reflect the interest rates that are available to private, commercial enterprises in Bolivia that are not in financial distress*," and thus represent "*[t]he common standard for 'normal commercial' interest rates in Bolivia*."[1306] But Claimant is not a commercial enterprise in Bolivia, applying for a commercial loan denominated in US dollars.

882. As Bolivia explained in its previous pleadings, the true investor and claimant in this arbitration is Glencore International A.G. – a Swiss mining company a fact which should lead to the dismissal of Claimant's claims for lack of jurisdiction *ratione personae*. As a Swiss mining company, Glencore International A.G. finances itself on international markets at rates barely higher than LIBOR on loans worth billions of US$.[1307] In fact, the company's borrowing rates have actually been dropping further below LIBOR +1%. Glencore International's 2016 Annual Report shows that, in 2016, it had obtained US$ 14 billion in revolving credit facilities

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1302 Treaty, **C-1**, Article 5(1) (emphasis added).

1303 Statement of Defence, ¶ 928.

1304 Reply on Quantum, ¶ 177.

1305 Reply on Quantum, ¶ 178.

1306 Reply on Quantum, ¶ 177.

1307 Statement of Defence, ¶ 931.

at LIBOR plus 0.50 to 0.60,[1308] and its 2019 report shows that it secured a further US$ 9.7 billion in revolving credit facilities at LIBOR + 0.40.[1309]

883. Even if, *par impossible*, the Tribunal were to dismiss this jurisdictional argument and find that Glencore (Finance) Bermuda is the true investor and claimant, that Party would still not be a Bolivian company seeking financing in Bermuda, but a Bermudan one instead – a shell with no activity, [redacted][1310]

884. Claimant's self-serving interpretation of Article V of the Treaty should be dismissed for this reason alone.

885. *Second*, Claimant argues, without any analysis, that the Tribunal should apply the interest rate it puts forward essentially because so too have the tribunals in two other cases against the State, *South American Silver* and *Rurelec*.[1311] However, the Tribunal is not bound by these decisions – there is no doctrine of *stare decisis* or rule of binding precedent in international law.[1312] Instead, each international arbitral tribunal is constituted to decide a dispute between the parties to such particular dispute, and sovereign in its decision-making.[1313] It does not suffice that other tribunals may have decided to apply the interest rate on commercial loans in Bolivia to different claimants for this Tribunal's decision on interest to go in the same direction. Claimant bears the burden of analysing the text of Article V and demonstrating that

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1308 Glencore Annual Report 2016 of 1 January 2016, **EO-40**, p. 50.

1309 Glencore Annual Report, 2019, **QE-59**, p. 51.

1310 [redacted]

1311 Reply on Quantum, ¶ 180.

1312 C. N. Brower, M. Ottolenghi, P. Prows, "The saga of CMS: res judicata, precedent and the legitimacy of ICSID arbitration", *International Investment Law for the 21st Century: Essays in Honour of Christoph Schreuer*, 2009, **RLA-215**, p. 852 ("*There is an important doctrinal difference […] between a tribunal 'taking account' of prior awards and actually being bound to follow them. Indeed, as a formal matter, the fact that ICSID tribunals have referred to prior ICSID decisions with greater frequency in the last five years does not mean that these tribunals have adopted a doctrine of binding precedent—nor is it clear that they would have the authority to do so. Indeed, even the much-discussed emergence of an 'investment jurisprudence', a 'jurisprudence constante', and a 'common law of international adjudication' does not equate to the adoption of a doctrine of binding precedent*") (emphasis added).

1313 *RECOFI SA v. The Socialist Republic of Vietnam*, UNCITRAL, Judgment of the Federal Supreme Court of Switzerland of 20 September 2016, **RLA-216**, pp. 6-7 ("*[T]here is no rule requiring an arbitral tribunal to heed decisions previously taken by other arbitral tribunals on the same issue, as they are not binding precedents Wintershall Aktiengesellschaft v. Argentine Republic*, ICSID Case No. ARB/04/14, Award of 8 December 2008, **RLA-217**, ¶ 194 ("*[S]tare decisis has no application to decisions of ICSID tribunals – each tribunal being constituted ad hoc to decide the dispute between the parties to the particular dispute – The award of such tribunal is binding only on the parties to the dispute (Article 53 of the [ICSID] Convention) – not even binding on the States of which the investor is a national. Decisions and Awards of ad hoc tribunals have no binding precedential effect on successive tribunals, also appointed ad ahoc between different parties*" (emphasis added)); *Urbaser S.A. and Consorcio de Aguas Bilbao Biskaia, Bilbao Biskaia Ur Partzuergoa v. The Argentine Republic*, ICSID Case No. ARB/07/26, Decision on Claimants' Proposal to Disqualify Professor Campbell McLachlan, Arbitrator of 12 August 2010, **RLA-218**, ¶ 49 ("*Despite many statements made in ICSID awards affirming the necessity or the duty to achieve consistency through ICSID case law, the principle remains that each Tribunal is sovereign in its decision making*" (emphasis added)).

such Article prescribes the application of, as it claims, the "*rates published by the Central Bank of Bolivia for commercial loans denominated in US dollars granted by banks to corporations in Bolivia.*"[1314] Claimant has not discharged such burden.

886. In any event, the Tribunal should not follow in the footsteps of the *Rurelec* and *South American Silver* tribunals, insofar as the decisions on interest reached by these tribunals are inherently contradictory and, thus, flawed. Both tribunals awarded claimants interest at rates which compensated them for risks that they had not borne, despite expressly stating that such interest was not to compensate for risks in which the claimants had not incurred.

887. In *Rurelec*, the tribunal agreed with Bolivia that the rates proposed by the claimants (equivalent to the WACC of the nationalised asset[1315]) would have rewarded them for risks that they had not borne since the expropriation of their assets.[1316] In the tribunal's words:

> *[t]he Tribunal must therefore reject the application of EGSA's May 2010 WACC as the applicable interest rate, both because it does not constitute 'a normal commercial or legal rate', as well as for precisely the reasons set forth by Econ One's Dr Flores: the WACC includes an ex ante allowance for forward-looking business risks which should not be applied ex post, since Rurelec has not faced them since May 2010.*[1317]

888. In *South American Silver* the tribunal began its analysis by recognizing that neither the Treaty nor Bolivian law established a "normal commercial interest rate."[1318] As in *Rurelec*, the Tribunal then agreed with Bolivia "*that to establish an interest rate based on the risks SAS [South American Silver] would have faced if it invested the money or SAS' risk as a lender would be inappropriate – and, moreover, speculative given the circumstances of the case in light of the uncertainty of how each investor may invest the funds*."[1319]

889. However, despite holding that interest rates should not compensate investors for risks that they have not borne, both tribunals nevertheless awarded claimants interest at rates which did in fact compensate for risk, *i.e.*, the interest rates for commercial loans as published by the

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1314 Reply on Quantum, ¶ 177. Claimant itself admits it bears the burden of proving its own case on damages. Reply on Quantum, ¶ 24.

1315 *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 607.

1316 *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 615.

1317 *Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶ 615 (emphasis added).

1318 *South American Silver Limited v Plurinational State of Bolivia* (PCA Case No. 2013-15), Award of 22 November 2018, **CLA-252**, ¶ 888 ("*[n]either the Treaty nor the law of Bolivia as explained by the Parties establish what a 'normal' com-mercial interest rate is*").

1319 *South American Silver Limited v Plurinational State of Bolivia* (PCA Case No. 2013-15), Award of 22 November 2018, **CLA-252**, ¶ 889.

Central Bank of Bolivia. These rates account for the risks related to the specific product that generated these interests: loans granted to Bolivian companies, operating in Bolivia and exposed to the risks inherent in such operations.

890. As Dr Flores explains, "*lenders to Bolivian businesses require interest above a risk-free rate to compensate for the ex ante risk that those business will default on their debts at some point in the future*."[1320] Dr Flores further clarifies that "*(i) the average commercial loan in Bolivia is for a relatively small amount and (ii) the average commercial borrower in Bolivia does not have very high credit rating*."[1321]

891. This Tribunal should not reproduce the flawed reasoning of the tribunals in *Rurelec* and *South American Silver*.

892. It would further be inappropriate for this Tribunal to follow the *South American Silver* and *Rurelec* decisions, if only because, in those cases, the arbitration commenced months after the relevant facts took place[1322] and the pre-award interest claims spanned 3.5 and 6 years, respectively. In the present case, Glencore International and Bolivia engaged in good faith negotiations regarding the compensation owed to the former for ten years before this arbitration commenced, and the pre-award interest claim spans over 14 years.[1323] It would be deeply unfair to penalise Bolivia for engaging in good faith negotiations by applying an unjustifiably high interest rate, as Claimant asks the Tribunal to do.

893. *Third*, Claimant posits that the interest rate under the Treaty must necessarily be a risked rate, to remunerate Claimant for the risk associated with its investment in Bolivia. In Claimant's words, "*the Treaty rate is a proxy for an investor's expected return on its investments in Bolivia, and those returns are not risk free*."[1324] This submission calls for the following three comments:

894. One, Claimant has marshalled no evidence whatsoever to support the notion that the Treaty rate would be a proxy for an investor's return on its investment. The Treaty is unconcerned with such returns. Instead, it establishes the rate at which interest should accrue on compensation for expropriation, so that the owner of the expropriated property may be

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1320 Econ One, ¶ 197.

1321 Quadrant II, ¶ 211.

1322 The arbitration commenced 6 months after the facts in *Rurelec* (*Guaracachi America, Inc and Rurelec Plc v Plurinational State of Bolivia* (UNCITRAL) Award of 31 January 2014, **CLA-120**, ¶¶ 5, 151) and after 8 months in *South American Silver* (*South American Silver Limited v Plurinational State of Bolivia* (PCA Case No. 2013-15), Award of 22 November 2018, **CLA-252**, ¶¶ 7, 169).

1323 Statement of Defence, ¶ 232; Rejoinder on the Merits, ¶ 352.

1324 Reply on Quantum, ¶ 185.

adequately compensated for any delay in the payment of such compensation. Interest – both under the Treaty and under international law – compensates for the time value of money, and nothing else.[1325]

895. Two, Claimant's assertion that "*the Treaty rate is a proxy for an investor's expected return on its investments in Bolivia*" is absurd. This assertion suggests that either (i) all foreign investors in Bolivia would have the same expected rate of return on their investments, irrespective of the sector and industry in which they operate and of the specific risk profiles of each investor or (ii) different rates of interest apply under the Treaty, to different investors, depending on their specific circumstances. Neither proposition is tenable, the former because it is incorrect from an economic standpoint, and the latter because it would run counter the function of interest (compensating the investor for the time value of money).

896. Three, Claimant's position entails equating this Tribunal's award with an investment made by Claimant in Bolivia, exposed to the risks which would normally characterise such an investment. This is incorrect.

897. On the one hand, all risks associated with the Assets ceased to be incurred by Claimant immediately following the reversion of each of them, when such risks were transferred to the State. Claimant ceased owning, controlling, and incurring in any risk with respect to the Tin Smelter in 2007, the Antimony Smelter in 2010, and the Colquiri Mine in 2012.[1326] If Claimant were now to be compensated for such risks without having incurred them, it would be unjustly enriched – a circumstance which international law disallows.[1327]

1325 Franklin M. Fisher and R. Craig Romaine, "Janis Joplin's Yearbook and the Theory of Damages," Journal of Accounting Auditing & Finance, Vol. 5, Nos. 1-2 (New Series): 145-157 (Winter/Spring 1990) of 1 January 1990, **EO-39**, p. 146; *Vestey Group Ltd v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB/06/4, Award of 15 April 2016, **RLA-5**, ¶ 446 ("*The function of reparation is to compensate the victim for its actual losses. It is not to reward it for risks which it does not bear*"); *Burlington Resources, Inc v Republic of Ecuador* (ICSID Case No ARB/08/5) Decision on Reconsideration and Award of 7 February 2017, **CLA-134**, ¶ 533 ("*a claimant is entitled to interest compensating for the time value of money, but not for risk*"); *Cube Infrastructure Fund SICAV and others v. Kingdom of Spain*, ICSID Case No. ARB/15/20, Decision on Jurisdiction, Liability and Partial Decision on Quantum of 19 February 2019, **RLA-219**, ¶ 537 ("*The Tribunal agrees with the Vestey tribunal, which said that '[t]he function of reparation is to compensate the victim for its actual losses. It is not to reward it for risks which it does not bear*'").

1326 Supreme Decree No 29.026 of 7 February 2007, **C-20**; Supreme Decree No 499 of 1 May 2010, **C-26**; Supreme Decree No 1.264 of 20 June 2012, **C-39**.

1327 *Saluka Investments BV v Czech Republic* (UNCITRAL) Partial Award of 17 March 2006, **CLA-62**, ¶ 449 ("*The concept of unjust enrichment is recognised as a general principle of international law. It gives one party a right of restitution of anything of value that has been taken or received by the other party without a legal justification. As the Iran-United States Claims Tribunal has stated more specifically: 'There must have been an enrichment of one party to the detriment of the other, and both must arise as a consequence of the same act or event. There must be no justification for the enrichment, and no contractual or other remedy available to the injured party whereby he might seek compensation from the party enriched*'" (emphasis added)); *Amoco International Finance Corporation v Government of the Islamic Republic of Iran and others*, Partial Award (1987-Volume 15) Iran-US Claims Tribunal Report, **CLA-10**, ¶ 225; I. Marboe, *Calculation of Compensation and Damages in International Investment Law*, Oxford University Press, 2nd ed. 2017 (extract), **RLA-124**, ¶ 2.77.

898. Fisher and Romaine explained the logic of awarding interest at a risk-free rate in order to avoid compensation for risks no longer incurred by the victim of the wrongful act:

> *[w]e begin with a simple case. The violation took place at a single point of time, time 0. It involved the destruction of an asset whose value at that time is clearly known as Y. Hence, had damages been assessed at time 0, an award of Y would have made the plaintiff whole. Unfortunately, however, the processes of justice take time, and the award is to be made at time t > 0. How (if at all) should the plaintiff be compensated for this fact?*
>
> *At first glance, it may seem that the plaintiff is entitled to interest at its opportunity cost of capital, r. After all, had the plaintiff received Y at time 0 [the time of the event], it would have invested the funds, receiving presumably its average rate of return […]*
>
> *The fallacy here (in either version) has to do with risk. The plaintiff's opportunity cost of capital includes a return that compensates the plaintiff for the average risk it bears. But, in depriving the plaintiff of an asset worth Y at time 0, the defendant also relieved it of the risks associated with investment in that asset. The plaintiff is thus entitled to interest compensating it for the time value of money, but it is not also entitled to compensation for the risks it did not bear. Hence prejudgment interest should be awarded at the risk-free interest rate.*[1328]

899. Numerous arbitral tribunals have confirmed this approach,[1329] particularly in cases where the investor no longer operates the assets in respect of which it brings an expropriation claim.[1330]

1328 Franklin M. Fisher and R. Craig Romaine, "Janis Joplin's Yearbook and the Theory of Damages," Journal of Accounting Auditing & Finance, Vol. 5, Nos. 1-2 (New Series): 145-157 (Winter/Spring 1990) of 1 January 1990, **EO-39**, p. 146 (emphasis added). Fisher and Romaine's position has been confirmed by recent scholarship. In 2019, an article by Carey, Dippon and Taylor made reference to the two authors and their conclusions on the matter: "*Fisher and Romaine discuss the issues associated with only picking the winning side of an investment and the economic reality that although the claimant lost the upside of any potential investment, it was also relieved of the downside risk of any future investment it would have pursued. That is, not having the funds during the pre-judgement period, the claimant was deprived of the opportunity to invest, but it also was not exposed to the risk of those investments either. As a result, tribunals and judges in commercial arbitrations frequently may decide to achieve a risk-neutral payout to compensate claimants for the lost opportunity investment, such as a risk-free US Treasury bill interest rate*" (J. Carey and others, "Measuring Economic Damages with Maximum Certainty", *Global Arbitration Review* of 30 April 2019, **RLA-220**, p. 4 (emphasis added)). In 2017, Beharry also cited Fisher and Romaine, stating that "*the argument that the risk-free rate undercompensates claimants because it deprives them of the upside of a risky investment is flawed on multiple levels. The fundamental problem with this argument is that because the claimant never undertook the investment, it never bore any of the associated risks. Moreover, while the investor may have been deprived of the chance to make financial gains, it was equally relieved of the risk of financial losses. That is because not all risky ventures will turn out positively. It is the presence of uncertainty and risk that make it necessary to compensate investors with a higher return. In the case of compensating an investor for a wrongful act, a tribunal is dealing with an environment of certainty. Once the wrongful act has been committed, the claimant faces no market or commercial risk*" (Christina L. Beharry, "Prejudgment Interest Rates in International Investment Arbitration", *Journal of International Dispute Settlement*, May 2016, **QE-96**, pp. 75-76 (emphasis added)).

1329 *Cube Infrastructure Fund SICAV and others v. Kingdom of Spain*, ICSID Case No. ARB/15/20, Decision on Jurisdiction, Liability and Partial Decision on Quantum of 19 February 2019, **RLA-219**, ¶¶ 535, 537.

1330 *Murphy Exploration and Production Company International v. Republic of Ecuador [II]*, PCA Case No. 2012-16, Partial Final Award, **RLA-99**, ¶ 450; *Burlington Resources, Inc v Republic of Ecuador* (ICSID Case No ARB/08/5) Decision on Reconsideration and Award of 7 February 2017, **CLA-134**, ¶¶ 533-535; *Vestey Group Ltd v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB/06/4, Award of 15 April 2016, **RLA-5**, ¶ 446; *Yukos Universal Limited (Isle of Man) v Russian Federation* (PCA Case No AA 227) Final Award of 18 July 2014, **CLA-122**, ¶¶ 1684-1685; *Perenco Ecuador Limited v. The Republic of Ecuador*, ICSID Case No. ARB/08/6, Award of 27 September 2019, **RLA-204**, ¶ 410, footnote 453.

Claimant implicitly accepted this proposition, which Bolivia explained in the Statement of Defence,[1331] when it decided to offer no comments on it in its Reply on Quantum.

900. In *Perenco v Ecuador*, an expert associated with Compass Lexecon argued that interest should only compensate for the time value of money and thus risk-free rates should be applied by the tribunal. The expert's reasoning is explained and quoted in the *Burlington v Ecuador* award:

> *[t]his was also the approach taken by Perenco's expert, Prof. Kalt also of Compass Lexecon, in connection with Perenco's claim for past cash flows against Ecuador. After explaining that future cash flows must be discounted at the WACC, Dr. Kalt refers to the actualization of past cash flows as follows:*
>
> *"[…] If Perenco is to be kept economically whole, the amount of the final damages awarded should reflect the foregone value of not having access to that money for the period between when the amounts accrue and the evaluation date.*
>
> *Unlike the discount rate used to discount the stream of future cash flows discussed above, which must be high enough to compensate for the level of non-diversifiable project-related risk, the rate used to compensate Perenco for the time value of these monies is lower. This reflects the fact that, while Perenco is forgoing the time value of money on any damages award while waiting for such an award, the award amount is not being invested by Perenco in any risky endeavour that would require compensation for risk. Accordingly, the interest factor to be applied to the historical period up to the date of actual payment of damages to Perenco is a relatively low and risk-free rate of interest.*[1332]

901. On the other hand, Claimant was no longer exposed to any risk relating to any of the Assets following their respective reversion. The financial product generating the interest payments in the present case is the Tribunal's award, not the allegedly expropriated Assets. As explained by Dr Flores in his first report, the interest rate should reflect the award's risk profile,[1333] and not that of the Assets. Bolivia explained in the Statement of Defence (and Claimant has not denied in its Reply on Quantum) that the award is not exposed to any risk.[1334]

902. There is, thus, no reason for the Tribunal to award interest at anything but a risk-free rate in the present case.

1331 Statement of Defence, ¶ 919.

1332 *Burlington Resources, Inc v Republic of Ecuador* (ICSID Case No ARB/08/5) Decision on Reconsideration and Award of 7 February 2017, **CLA-134**, ¶ 534 (emphasis added). See *Perenco Ecuador Limited v. The Republic of Ecuador*, ICSID Case No. ARB/08/6, Award of 27 September 2019, **RLA-204**, footnote 453 ("*This is based on actual historical published annualised yield of the 10-year US T-note as reported by the US Federal Reserve and published daily by the US Federal Reserve Board. This historical yield data is contained in Prof. Kalt's Exhibits JK-39 and JK-77C, as well as Brattle Exhibits BR-20 and BR-116. The Tribunal understands that Federal Reserve publishes annualised yields. The experts have consistently used the same series of annualised yields throughout the quantum proceedings.*" Professor Kalt is a Compass Lexecon expert).

1333 Econ One, 196.

1334 Statement of Defence, ¶ 928.

903. *Fourth*, in a final attempt to defend the reasonableness of its proposed interest rates, Claimant asserts that such rates would be (i) "*lower than the rates at which Bolivia could have borrowed funds*,"[1335] (ii) "*modest as compared to the rate of return*" Claimant expected to receive from the Assets,[1336] and (iii) reasonable if compared to the cost of financing for corporations in Latin America.[1337] These comparisons are inapposite.

904. One, the rate at which Bolivia could have borrowed funds in the past (or at which it continues to do so in the present) is irrelevant for the purposes of establishing the rate of interest on the compensation this Tribunal may award Claimant (*quod non*).

905. Claimant, without expressly stating so, is attempting to apply the coerced loan theory, also known as the forced debtor approach. This theory is based on the assumption that the funds subject to delay would have been affected by the default risk of the debtor, as if the "*[l]ate payment of compensation or damages by states [could] also be regarded as a loan granted by the investor [to the State]*," and thus "*the pre-award interest rate should correspond to the short-term borrowing rate of the respondent*."[1338] The application of this theory, however, inevitably leads to "*the amount of interest [having] nothing to do with the claimant's actual loss*."[1339] This position, in turn, is inconsistent with the principle that, under international law, compensation is aimed at repairing the harm actually suffered by the victim,[1340] and thus it is unconcerned with the circumstances (including the risk profile) of the perpetrator of the allegedly wrongful act. In addition, a State's borrowing rate accounts for the risk of default of sovereign debt, which is inapposite to the interest rate applied to an award on damages. It is only logical that this theory *has never been accepted* by investment tribunals.

906. Two, Claimant's expected rate of return is also irrelevant for the purposes of establishing the rate of interest applicable in the present case. Claimant is well aware of this fact or else it would have requested that the Tribunal apply an interest rate equivalent to its weighted average cost of capital (or "WACC," proposed by claimants and rejected by both the *Rurelec* and *South American Silver* tribunals). It did not do so.

1335 Reply on Quantum, ¶ 181.

1336 Reply on Quantum, ¶ 182.

1337 Reply on Quantum, ¶ 183.

1338 I. Marboe, *Calculation of Compensation and Damages in International Investment Law*, Oxford University Press (2017), **RLA-104(bis)** , ¶ 6.109.

1339 I. Marboe, *Calculation of Compensation and Damages in International Investment Law*, Oxford University Press (2017), **RLA-104(bis)** , ¶ 6110.

1340 As Claimant itself admits. Reply on Quantum, ¶ 7.

907. Claimant's expected rate of return could only have been relevant if Claimant had presented a separate claim for lost profits on account of an investment it would have been prevented from making by Bolivia's allegedly unlawful conduct, *i.e.*, a separate claim for *interest as damages* instead of simply claiming *interest on damages*. Such claim would have entailed that Claimant prove the certainty and value of the foregone profits: it would have been subject to the same legal test as any claim for damages, such as causation, foreseeability and proof of loss:

> *[i]n order for a tribunal to award interest as damages, a claimant first would need to assert a claim for interest as damages. Thus, the claimant would have to show that there exists the authority to award interest as damages, that the loss was caused by the respondent, that it was foreseeable and that the claimant could prove the loss with sufficient degree of certainty.*[1341]

908. Claimant has not brought any such claim.

909. Three, the cost of financing for corporations in Latin America is likewise irrelevant to this Tribunal's decision on interest.

910. On the one hand, the average cost of financing for corporations in Latin America used by Compass Lexecon encompasses the cost of financing of different corporations, with different characteristics, operating in different economies.[1342] Claimant has not bothered to explain why this data would be relevant in the present case. As Dr Flores has explained, the interest rates for Latin American corporations used by Compass Lexecon are based on the "ICE BofA Latin America Emerging Markets Corporate Plus Index," and account for default and maturity risks, similarly to the rates published by the Central Bank of Bolivia, which are risks not borne by Claimant:

> *[t]his index tracks the performance of U.S. dollar and euro denominated debt publicly issued by corporations associated with Latin America. Similar to the rates used by Compass Lexecon, the interest rates derived from this index include compensation for both maturity risk and default risk, risks that the Claimant has not borne.*[1343]

911. On the other hand, Claimant and Glencore International (i) are not average businesses; (ii) do not acquire average loans with average rates; (iii) are not Latin American corporations; and (iv) they have not (and will not) seek commercial loans in Bolivia or in Latin America. The comparison simply does not stand. Moreover, Claimant and Glencore International have

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1341 TJ Sénéchal and JY Gotanda, "Interest as Damages" (2008-2009) Vol 47 Columbia Journal of Transnational Law 491, **CLA-75**, p. 514 (p. 24 of the pdf).

1342 Compass Lexecon II, footnote 214.

1343 Quadrant II, ¶ 212.

access to international financing at much lower rates: Glencore International is able to borrow billions of dollars at rates lower than LIBOR +1%.[1344]

912. *Fifth*, Claimant's rejection of the 6-month or 1 year U.S. Treasury bills rates is unavailing. This rejection is based on the mistaken assumption that said rates would not be applicable for being rates for short-term debt, when Bolivia purportedly would owe Claimant compensation for over ten years.[1345] As Dr Flores has explained, whether a rate reflects short or long-term debt is irrelevant for pre-award interest.[1346] The only relevant factor to determine pre-award interest rate is risk,[1347] and the U.S. Treasury bills rates are applicable because they are risk-free. Moreover, rates reflecting long-term debts account for maturity risks, which have not been borne by Claimant:

> *[l]enders demand higher returns for longer-duration bonds to account for the possibility that the value of the bond itself will fall if interest rates rise because their bonds will have become less attractive than other bonds. Any amounts awarded to Claimant will be fixed even if the interest rates risel, so Claimant will not have been exposed to the maturity risk of longer-duration bonds. Therefore, Claimant should not be compensated for another risk it did not bear.*[1348]

913. Accordingly, Bolivia respectfully requests that the Tribunal dismiss Claimant's arguments on interest, and instead order interest at a risk-free rate equivalent to the 6-month or 1 year yield of U.S. Treasury bills.[1349] This rate:

- Falls squarely within the Treaty's prescription of a normal commercial or legal rate applicable in Bolivia. U.S. Treasury bills can be bought through banks, brokers and directly from the U.S. Treasury, and thus constitute rates that are regularly available to investors (including in Bolivia);[1350]

- Is reasonable from an economic standpoint. As explained by Dr. Flores, a commercial interest rate "*will depend on the risk profile of the financial product generating the interest payments.*"[1351] In the present case, the financial product

1344 Statement of Defence, ¶ 937; Econ One, ¶ 198.

1345 Reply on Quantum, ¶ 184; Compass Lexecon II, ¶ 124.

1346 Quadrant II, ¶ 206.

1347 Quadrant II, ¶ 206.

1348 Quadrant II, ¶ 207.

1349 Quadrant II, ¶ 199.

1350 Statement of Defence, ¶ 928; Econ One, ¶ 196.

1351 Econ One, ¶ 196.

generating the interest payment is this Tribunal's award, which is not exposed to risk;[1352] and

- Does not "*reward [Bolivia] for its wrongdoing*,"[1353] as Claimant incorrectly asserts. As explained above, "*the rates at which Bolivia could have borrowed funds had it promptly compensated [Claimant]*" are irrelevant for the purposes of this Tribunal's decision on interest.

5.1.2 If The Tribunal Were To Decide That Interest Should Compensate Also For Non-Existent Risk (*Quod Non*), It Should At Most Award Interest At The US LIBOR + 1% Rate

914. If the Tribunal were minded to award Claimant interest at a risked rate, Bolivia requests that such rate be equivalent to the US LIBOR + 1% rate.[1354]

915. *First*, Claimant offers a brief and unconvincing rebuttal of this proposition, based on the following three incorrect arguments:

916. One, Claimant rejects the application of LIBOR-based rates, as they would not be "*indicative of 'normal commercial rates' in Bolivia*."[1355] However, much as the US Treasury bill yield discussed in Section 5.1.1 *supra*, this rate is available in Bolivia and to Bolivian companies in the course of their business (and also to Glencore International, the true investor and claimant, in the regular course of its business[1356]). As Bolivia explained in the Statement of Defence, international banks and, more generally, international markets set lending rates by reference to the LIBOR rate for the given currency plus a small margin.[1357] Claimant offers no comments on this fact in the Reply on Quantum, which it thus implicitly confirms.

917. Two, Claimant asserts that the US LIBOR +1% rate would be inappropriate as it allegedly "*ignores the reality that businesses typically invest in opportunities that have a significantly greater amount of risk that […] LIBOR rates.*"[1358] The *Rurelec* and *South American Silver* tribunals cited by Claimant have already decided that interest should not compensate

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1352 Statement of Defence, ¶ 928; Econ One, ¶ 196.

1353 Reply on Quantum, ¶ 187.

1354 Quadrant II, ¶ 212 ("*Therefore, even if interest in this Arbitration were to include ex ante risks such as default risk and maturity risk (as explained above, it should not), there would be no justification for awarding interest at a higher rate than LIBOR + 1%*").

1355 Reply on Quantum, ¶ 184.

1356 As Bolivia explained previously, Glencore International has borrowed sums of money far superior to the amount in dispute in this arbitration at LIBOR + 0.4 rate. See Glencore Annual Report, 2019, **QE-59**, p. 51.

1357 Statement of Defence, ¶ 931.

1358 Reply on Quantum, ¶ 186, citing TJ Sénéchal and JY Gotanda, "Interest as Damages" (2008-2009) Vol 47 Columbia Journal of Transnational Law 491, **CLA-75**, pp. 36-37.

claimants for risks they did not bear. In any case, Claimant's so-called "*reality*" is irrelevant to the present discussion. As explained in Section 5.1.1 *supra*, the financial product that generates interest in the present case will be the Tribunal's award, and not the Assets themselves. Claimant has not held the Assets nor incurred in any risks related to them since their respective reversions.

918. Three, Claimant asserts that it is irrelevant that Glencore International has secured financing of billions of dollars at an average rate of US LIBOR + 1% in the past.[1359]

919. This cannot be so when, as Bolivia explained, Glencore International is the investor and true claimant in this arbitration.[1360] On Claimant's own case, international law mandates that reparation place the victim of the unlawful act in the situation in which it would have been but for the unlawful act. Thus, Glencore International's cost of borrowing, as the true victim of Bolivia's allegedly unlawful conduct, is the only one that is relevant. If Glencore International needed to access credit to offset the value of the damages claimed in this arbitration, it would have obtained such credit at an interest rate of US LIBOR+1 and lower.

920. Glencore International's cost of borrowing is all the more relevant since Claimant's cost of borrowing is, unsurprisingly, unknown. After all, Claimant is a shell company with no activity, no offices and no personnel.[1361] Thus, even if the Tribunal were to dismiss Bolivia's *ratione personae* jurisdictional objection, the sole proxy at its disposal for Claimant's cost of borrowing would still remain the cost of borrowing of Glencore International.

921. *Second*, Claimant fails to comment on the extensive case law cited by Bolivia, demonstrating the application by numerous international tribunals of the LIBOR rate plus a small margin as a normal commercial interest rate.[1362] Nor does Claimant comment on the fact that Profs. Gotanda and Sénéchal, whom it cites in support of its proposed interest rates, also recognise that the approach taken by investment tribunals is to award interest at a market rate such as the U.S. Treasury bills or LIBOR rates.[1363]

1359 Statement of Defence, ¶ 931; Reply on Quantum, ¶ 184; Compass Lexecon II, ¶¶ 118-122, 128.

1360 Rejoinder on the Merits, ¶¶ 452-456. Glencore Bermuda was not involved in the negotiations leading to the acquisition of the Assets, did not enter into the stock purchase agreements for the control of the Assets and never operated or managed the Assets, as all these roles were performed by Glencore International.

1361 Rejoinder on the Merits, ¶¶ 344, 477.

1362 Statement of Defence, ¶ 934.

1363 TJ Sénéchal and JY Gotanda, "Interest as Damages" (2008-2009) Vol 47 Columbia Journal of Transnational Law 491, **CLA-75**, p. 510.

922. For all these reasons, Bolivia respectfully requests that, if the Tribunal were to discard the application of the 6-month or 1 year yield of the U.S. Treasury bills as the rate of interest applicable in the present case, it retain instead a rate equivalent to US LIBOR +1%.

5.2 Claimant Can, At Most, Claim Simple Interest

923. The Treaty does not mandate the compounding of interest under Article V. Claimant once again abandons the Treaty in favour of what it perceives to be the more favourable regime under international law, which, it claims, prescribes the application of compound – instead of simple – interest. Claimant's position is incorrect, for the following three reasons:

924. *First*, the Commentary to the International Law Commission's Articles on State Responsibility notes that simple interest should be awarded under international law:

> *[t]he general view of courts and tribunals has been against the award of compound interest, and this is true even of those tribunals which hold claimants to be normally entitled to compensatory interest.*[1364]

925. *Second*, even though, more recently, some tribunals have awarded compound interest in some cases, other tribunals have refused to do the same, favouring simple interest instead.[1365] Claimant does not address this point, simply stating that "*Bolivia can cite only a few inapposite arbitral decisions*"[1366] to support its position that simple interest should apply. Claimant only engages with one of the authorities cited by Bolivia, asserting that the *Yukos* tribunal supports its own position that compound interest is the norm.[1367] The *Yukos* tribunal, however, does not award compound interest.[1368]

926. The award of compound interest is far from unanimous, and should only be granted according to specific circumstances, as the *Santa Elena v. Costa Rica* tribunal explained:

1364 International Law Commission, "Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentary" [2001-II(2)] Yearbook of the International Law Commission, **CLA-30**, p. 108, point (8).

1365 Statement of Defence, ¶¶ 940-943. See *CME Czech Republic BV v Czech Republic* (UNCITRAL) Final Award of 14 March 2003, **CLA-42**, ¶ 644 ("*[i]n respect of international law, arbitral tribunals in the past awarded compound interest infrequently*"); *Mr Franck Charles Arif v. Republic of Moldova*, ICSID Case No. ARB/11/23, Award of 8 April 2013, **RLA-69**, ¶ 619 ("*Claimant has not justified compound interest, and given the nature of the damages in this case, the Tribunal considers simple interest is more appropriate*"); *Rosinvestco UK Ltd. v. The Russian Federation*, SCC Arbitration V (079/2005), Final Award of 12 September 2010, **RLA-117**, ¶ 689 ("*[i]f […] the Tribunal finds it should award interest at a normal commercial rate, this does not mean the Tribunal is bound to award compound interest*").

1366 Reply on Quantum, ¶ 189.

1367 Reply on Quantum, ¶ 189.

1368 *Yukos Universal Limited (Isle of Man) v Russian Federation* (PCA Case No AA 227) Final Award of 18 July 2014, **CLA-122**, ¶ 1689 ("*the Tribunal has concluded that, in the circumstances of this case, it would be just and reasonable to award Claimants simple pre-award interest and post-award interest compounded annually if Respondent fails to pay in full to Claimants the damages for which it has been held liable before the expiry of the grace period hereinafter granted*").

> *[n]o uniform rule of law has emerged from the practice in international arbitration as regards the determination of whether compound or simple interest is appropriate in any given case. Rather, the determination of interest is a product of the exercise of judgment, taking into account all of the circumstances of the case at hand and especially considerations of fairness which must form part of the law to be applied by this Tribunal.*[1369]

927. Claimant has still not indicated which circumstances of the present case would justify the award of compound interest. The only "circumstance" which Claimant could invoke is its own financial betterment, given that the claims it has submitted before this Tribunal relate to events that took place between 5 and 10 years ago.[1370] While it is unsurprising that Claimant would prefer to be granted compound interest over this extensive period of time, this self-serving preference is not enough to support a claim for US$ 338.6 million (as of 22 January 2020). The self-serving nature of Claimant's compound interest claim is evidenced by the substantial difference between the value of such claim and the amount of interest that would accrue using simple interest:[1371]

	Compound	Simple
Glencore Bermuda	US$ 338.6 million	US$ 249.2 million
Bolivia	US$ 32.8 million	US$ 31.7 million

928. *Third*, international law allows the Tribunal to refer to domestic law as regards interest. As Bolivia explained in the Statement of Defence, the tribunals in the cases *Desert Line v Yemen*, *Aucoven v Venezuela* and *Duke Energy v Ecuador*[1372] have enforced local prohibitions of compound interest and have applied simple interest instead. Claimant offers no comment on

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1369 *Compañía del Desarrollo de Santa Elena SA v Republic of Costa Rica* (ICSID Case No ARB/96/1) Final Award of 17 February 2000, **CLA-25**, ¶ 103 (emphasis added).

1370 Statement of Defence, ¶ 944.

1371 Bolivia's values were based on the 1 year U.S. Treasury Bill rate. See also Quadrant II, ¶ 213 ("*For illustrative purposes, applying the rates of the one year U.S. Treasury to Compass Lexecon's results leads to interest of US$ 32.8 million. That is, Compass Lexecon's calculation of interest is inflated by US$ 305.8 million*").

1372 *Desert Line Projects LLC v. The Republic of Yemen*, ICSID Case No. ARB/05/17, Award of 6 February 2008, **RLA-119**, ¶¶ 294-295; *Autopista Concesionada de Venezuela, CA v Bolivarian Republic of Venezuela* (ICSID Case No ARB/00/5) Award of 23 September 2003, **CLA-44**, ¶ 396; *Duke Energy Electroquil Partners & Electroquil S.A. v. Republic of Ecuador*, ICSID Case No. ARB/04/19, Award of 18 August 2008, **RLA-120**, ¶ 457.

these authorities, and limits itself to asserting – without grounds – that the prohibition of compound interest under Bolivian law would be inapplicable in this case. [1373]

929. On Claimant's case, Bolivian law would actually allow the award of compound interest in commercial matters,[1374] despite the Civil Code's prohibition of this practice in its Articles 412 and 413.[1375] For this proposition, Claimant relies on Article 800 of the Bolivian Commercial Code, which reads as follows:

> *Art. 800.- (CAPITALIZACION DE INTERESES). No se puede capitalizar intereses devengados y aún no pagados, salvo que ello se haya convenido con posterioridad a la celebración del contrato o cuando el acreedor demande judicialmente su pago. Empero en cualquiera de estos casos deben concurrir las siguientes circunstancias: 1) Que los intereses se adeuden por más de un año; y 2) Que la mora en el pago del capital e intereses no sea imputable al acreedor. Es nulo el pacto en contra de lo dispuesto en este artículo.*[1376]

930. Claimant's position is incorrect, for two reasons:

931. One, the Bolivian Commercial Code is only applicable to legal relationships related to commercial activity.[1377] The hypothesis of compensation for expropriation is not contemplated in the definition of commercial activity established by Article 6 of the Commercial Code,[1378] which is therefore not applicable to the facts that serve as basis for Claimant's claims.

1373 Reply on Quantum, ¶ 190.

1374 Reply on Quantum, ¶ 192.

1375 Civil Code of the Plurinational State of Bolivia, **RLA-118**, Articles 412 and 413 ("*Artículo 412 - Están prohibidos el anatocismo y toda otra forma de capitalización de los intereses. Las convenciones en contrario son nulas. Artigo 413 - El cobro de intereses convencionales en tasa superior a la máxima legalmente permitida, así como de intereses capitalizados, constituye usura y se halla sujeto a restitución, sin perjuicio de las sanciones penales*") (Unofficial translation: "*Article 412 - Anatocism and all other forms of capitalization of interests are prohibited. Agreements to the contrary are void. Article 413 - Charging conventional interests at a higher rate than the maximum legally permitted, as well as of capitalised interests, constitutes usury and is subject to restitution, regardless of criminal sanctions*").

1376 Civil Code of the Plurinational State of Bolivia, **RLA-118**, Article 800 (Unofficial translation: "*Art. 800.- (COMPOUND INTEREST). Accrued and unpaid interest cannot be compounded, unless this has been agreed after the execution of the contract or when the creditor judicially demands its payment. However, in any of these cases, the following circumstances must be met: 1) The interest is due for more than one year; and 2) The delay in the payment of principal and interest is not attributable to the creditor. The agreement is void against the provisions of this article*") (emphasis added).

1377 Bolivian Commercial Code, **R-527**, Art. 1 ("*Art. 1º (ALCANCE DE LA LEY). El Código de Comercio regula las relaciones jurídicas derivadas de la actividad comercial*") (Unofficial translation: "*Article 1 (SCOPE OF THE LAW). The Commercial Code regulates the legal relationships derived from commercial activity*").

1378 Article 6 brings 21 examples of commercial activity – such as "*[l]a compra de mercaderías o bienes muebles destinados a su venta en el mismo estado o después de alguna transformación, y la subsecuente enajenación de ellos, así como su permute*" (unofficial translation: "*the purchase of merchandise or movable property destined for sale in the same state or after some transformation, and their subsequent sale, as well as their exchange*"); and "[*l]a compra venta de una empresa mercantil o establecimiento comercial o la enajenación de acciones, cuotas o partes de interés del fondo social*"(unofficial translation: "*[t]he sale of a mercantile company or commercial establishment or the sale of shares, quotas or parts of interest of the social capital*") – none of them related to compensation for expropriation. Bolivian Commercial Code, **R-527**, Art. 6.

932. Two, even if the State were acting as a private entity in this case (*quod non*), still Article 800 would not be applicable to this case, as the conditions for its application are not satisfied.

933. Under Article 800, compound interest can be applied exceptionally, provided that (i) interest has accrued for over a year; and (ii) the delay in the payment of the principal and corresponding interest is not attributable to the creditor. Claimant chose not to commence this arbitration while Glencore and Bolivia negotiated further to the reversion of the Assets, for almost ten years. This choice contributed to the amount of time which will have lapsed between the reversions and any payment that Bolivia will make under the Tribunal's final award (*quod non*). Such contribution thus excludes the application of Article 800.

934. In conclusion, only simple interest may, at most, be awarded to Claimant in the present case.

6. PRAYER FOR RELIEF

935. Bolivia hereby incorporates the Prayers for Relief as contained in its Statement of Defence of 18 December 2017 and in its Rejoinder on the Merits of 24 October 2018.

936. In the event that:

a. the Tribunal finds that it has jurisdiction over Claimant's claims and that such claims are admissible; and

b. the Tribunal upholds the merits of some or all of Claimant's claims,

937. Bolivia respectfully requests the Tribunal to:

a. DECLARE that Claimant has failed to demonstrate it has suffered damages that are certain, and thus DISMISS all of Claimant's requests for compensation;

b. Should the Tribunal find that Claimant has suffered damages that are certain, DECLARE that Claimant's own conduct caused the reversion of the Assets (thus severing the chain of causation) and, thus, REJECT any compensation for the Assets' alleged expropriation; and REJECT any compensation request in relation to Claimant's FET and FPS claims, as Claimant has offered no causation analysis in support of said claims;

c. Should the Tribunal find that Bolivia was responsible for Claimant's damages, DECLARE that any compensation due to Claimant is limited to that calculated by Bolivia's experts; and

d. REDUCE any compensation due to Claimant by, at least, 75% for the Colquiri Mine and the Antimony Smelter, and 50% for the Tin Smelter on account of Claimant's material contribution to its own losses.

938. In the event the Tribunal decides to award interest on any compensation owed to Claimant, Bolivia respectfully requests that simple interest be awarded at a risk-free rate. Should the Tribunal award interest at a rate rewarding risk, the rate should not be higher than US LIBOR +1.

939. Finally, Bolivia respectfully requests that the Tribunal:

a. ORDER Claimant to reimburse Bolivia all costs and expenses incurred in this arbitration, including interest thereon due and payable from the date Bolivia incurred such costs and expenses until the date of full payment; and

b. ORDER any other relief as the Tribunal may consider appropriate.

Respectfully submitted this 8th day of June 2020

Dechert (Paris) LLP

Dechert (Paris) LLP