In the matter of an arbitration under the 1976 Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL)

ENI GHANA EXPLORATION AND PRODUCTION LIMITED

AND

VITOL UPSTREAM GHANA LIMITED

The Claimants

v.

THE REPUBLIC OF GHANA

AND

GHANA NATIONAL PETROLEUM CORPORATION

The Respondents

FINAL AWARD

Arbitral Tribunal

Ms. Judith Gill KC (Arbitrator)

Prof. Dr. Mohamed Abdel Wahab (Arbitrator)

Prof. Gabrielle Kaufmann-Kohler (President)

Tribunal Secretary

Dr. David Khachvani

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SELECTED ABBREVIATIONS AND DEFINITIONS

2018 GNPC Report	GNPC's Independent Investigation of Hydrocarbon Prone Cenomanian Turbidite Channel that Possibly Straddles WCTP Block 2 and OCTP/CTP Block 4 of 1 June 2018
2020 GNPC Report	GNPC's Independent Technical Evaluation of the Cenomanian Channel and Hydrocarbon Accumulation across the WCTP Block 2 and OCTP Block of 6 October 2020
2020 Petroleum Commission Note	Note by the Petroleum Commission concerning its recommendations for unitisation of the Sankofa Field and the Afina Discovery of 2 April 2020
2020 Springfield Report	Springfield's Brief Technical Report on the Extension of Sankofa Cenomanian Reservoir into West Cape Three Points Block 2 of January 2020
Abotsi ER1	First expert report by Prof. Ernest Kofi Abotsi of the University of Professional Studies Law School
Afina Discovery	Oil discovery by Springfield in the Afina-1X Well
Amor ER1	First expert report by Dr. Stuart Amor
Arbitration Agreement	Article 24 of the Petroleum Agreement in Respect of Blocks Offshore Cape Three Points entered into by Heliconia, GNPC and Ghana, represented by its MoE, on 2 March 2006
Aryeetey WS1	First witness statement of Mr. Michael Nii Armah Aryeetey
Aryeetey WS2	Second witness statement of Mr. Michael Nii Armah Aryeetey
April Directive	Directive issued by the MoE on 9 April 2020
Atuguba ER1	First expert report of Prof. Raymond A. Atuguba
C-	Claimants' exhibit
CHF	Swiss Franc
CLA-	Claimants' legal authority
Claimants	Jointly, Eni and Vitol – formerly Heliconia
Claimants' Technical Report	Internal report "Technical Evaluation Of The Afina Discovery In Relation To Sankofa East Cenomanian Oil Field" prepared by the Claimants in April 2021 based on the information received from the Petroleum Commission
Constitution	The Constitution of the Republic of Ghana
DCF	Discounted Cash Flow

Draft UUOA	Potential draft unitisation and unit operating agreement between Springfield and Eni
Eni	Eni Ghana Exploration and Production Limited, or the "First Claimant"; jointly with Vitol – formerly Heliconia – the "Claimants"
EUR	Euro
Exh.	Exhibit(s)
First Respondent	The Republic of Ghana, or "Ghana"
First Unitisation Request	The "Unitisation Request in Respect of the Sankofa East Oil Field and Sankofa Main Gas Field" that Springfield delivered to Ghana's Minister of Energy on 20 March 2018
Flores ER1	First expert report by Dr. Daniel Flores of Quadrant Economics
FPSO	Shared floating, production, storage and offloading vessel
GBP	Great British Pound
GCA	Gaffney, Cline & Associates Limited
Ghana	The Republic of Ghana, or the "First Respondent"
GNPC	Ghana National Petroleum Corporation, or the "Second Respondent"
GNPC Exploration	GNPC Exploration & Production Company Ltd
Hearing	The hearing held from 31 July 2023 to 7 August 2023 at the Hotel Napoleon in Paris, France
Heliconia	Heliconia Energy Ghana Limited, now "Vitol", or the "Second Claimant"
HoD	Heads of Decision prepared by the MoE following a meeting on 21 July 2021
ILA Report	International Law Association Recommendations on Lis Pendens and Res Judicata and Arbitration
JMC	Joint Management Committee
Joint Technical Team	A technical working group comprising a technical team from the MoE, and three nominees of the Claimants
Kosmos	Kosmos Energy Ghana Limited
MDT	Modular formation dynamics tester, a wireline-conveyed downhole testing tool which is run in a wellbore to provide direct measurements of formation pressure, and the collection of formation fluid samples

Mercer WS1	First witness statement of Hon. Andrew Mercer
Mercer WS2	Second witness statement of Hon. Andrew Mercer
Mmbls	Millions of barrels
MoE or Ministry	Ministry of Energy of Ghana
NAG	Non-associated gas
NoA	Notice of Arbitration, filed by the Claimants on 16 August 2021
November Directive	Directive issued by the MoE on 6 November 2020
October Directive	Directive issued by the MoE on 14 October 2020
OCTP	Offshore Cape Three Points area
OCTP Project	Project for the development of the resources in the OCTP area
OWC	Oil Water Contact
Owusu-Ansah WS1	First witness statement of Mr. Benjamin Owusu-Ansah
Owusu-Ansah WS2	Second witness statement of Mr. Benjamin Owusu-Ansah
Parties	Jointly, the Claimants and the Respondents
Petroleum Act	Ghanaian Petroleum (Exploration and Production) Act, 2016
Petroleum Agreement	Petroleum Agreement in Respect of Blocks Offshore Cape Three Points entered into by Heliconia, GNPC and Ghana, represented by its MoE, on 2 March 2006
Petroleum Agreement Contract Area	The OCTP contract area for exploration, development and production of petroleum in accordance with Annex 1 to the Petroleum Agreement
Petroleum Commission	Ghanaian Petroleum Commission
Petroleum Regulations	Ghana's Petroleum (Exploration and Production) (General) Regulations, 2018
PHB	Post Hearing Brief
PoD	Plan of Development concerning the OCTP Project
PUA	Pre-unitisation agreement
R-	Respondents' exhibit
Rejoinder	Statement of Rejoinder, filed by the Respondents on 12 June 2023

Reply	Statement of Reply, filed by the Claimants on 7 February 2023
Reply PHB	Reply Post Hearing Brief
Respondents	Jointly, Ghana and GNPC
SGD	Singapore Dollar
RLA-	Respondents' legal authority
S(s).	Section(s)
SA-	Exhibit of the expert report of Dr. Stuart Amor
Sankofa Cenomanian Field	Sankofa East Cenomanian oil field in the OCTP contract area
Second Claimant	Vitol Upstream Ghana Limited, or "Vitol", formerly Heliconia Energy Ghana Limited, or "Heliconia"
Second Respondent	Ghana National Petroleum Corporation, or "GNCP"
Second Unitisation Request	The second Unitisation Request that Springfield delivered to Ghana's Minister of Energy on 14 August 2018
SCC Procedures for UNCITRAL Cases	The Stockholm Chamber of Commerce Procedures for the Administration of Cases under the 1976 UNCITRAL Arbitration Rules
SoC	Statement of Claim, filed by the Claimants on 7 April 2022
SoD	Statement of Defense, filed by the Respondents on 8 September 2022
Springfield	Springfield Exploration & Production Limited
Stalder WS1	First witness statement of Mr. John-Paul Stalder
Stalder WS2	Second witness statement of Mr. John-Paul Stalder
STOOIP	Stock tank oil initially in place
Third Unitisation Request	Third unitisation request, asking for the MoE to order Springfield and Eni to undertake discussions for the unitisation of the OCTP and WCTP2 contract areas, sent by Springfield on 27 January 2020
ToA	Terms of Appointment dated 28 December 2021
TVDss	True vertical depth sub-sea
UNCITRAL Rules	The 1976 UNCITRAL Arbitration Rules
Unitisation Directives	The April Directive, the October Directive, and the November Directive, collectively
UUOA	Unitisation and Unit Operating Agreement

Vaalco	Vaalco Energy, Inc.
Valenti WS1	First witness statement of Mr. Giuseppe Valenti
Valenti WS2	Second witness statement of Mr. Giuseppe Valenti
Vitol	Vitol Upstream Ghana Limited
WCTP	West Cape Three Points area
WCTP1	Block 1 of the WCTP area
WCTP2	Block 2 of the WCTP area
WCTP2 Existing Discoveries	Oil discoveries made in WCTP2 prior to the relinquishment of parts of the area before July 2011
WCTP2 Petroleum Agreement	Petroleum Agreement in respect of WCTP2 entered into by Ghana, GNPC, GNPC Exploration and Springfield on 26 July 2016
Wilks ER1	First expert report by Mr. Matthew Wilks of SRL Consulting
Wilks ER2	Second expert report by Mr. Matthew Wilks of SRL Consulting
Wright ER1	First expert report by Stephen Wright of GCA
Wright ER2	Second expert report by Stephen Wright of GCA

I. INTRODUCTION

1. This arbitration is brought under the 1976 UNCITRAL Arbitration Rules (the "UNCITRAL Rules") and the Stockholm Chamber of Commerce Procedures for the Administration of Cases under the 1976 UNCITRAL Arbitration Rules (the "SCC Procedures for UNCITRAL Cases").

A. OVERVIEW OF THE DISPUTE

2. The dispute arises out of the Petroleum Agreement in respect of Blocks Offshore Cape Three Points Basin (the "Petroleum Agreement") concluded on 2 March 2006, initially between the Republic of Ghana (the "First Respondent" or "Ghana"), Ghana National Petroleum Corporation (the "Second Respondent" or "GNPC" and, jointly with Ghana, the "Respondents") and Vitol Upstream Ghana Limited (formerly Heliconia Energy Ghana Limited ("Heliconia")) (the "Second Claimant" or "Vitol"). Eni Ghana Exploration and Production Limited (the "First Claimant" or "Eni", jointly with Vitol, the "Claimants", and jointly with the Respondents, the "Parties") later joined the Petroleum Agreement as a majority interest holder and operator.

3. At the center of the dispute lie administrative measures taken by the Ministry of Energy of Ghana (the "MoE") through which the MoE ordered unitisation of two oil fields known as (i) Offshore Cape Three Points ("OCTP") operated by the Claimants, and (ii) West Cape Three Points ("WCTP") operated by a Ghanaian company, Springfield Exploration & Production Limited ("Springfield").

4. It is common ground between the Parties that the MoE has the authority to unitise oil fields in order to achieve efficient exploitation of the deposits. The Claimants argue, however, that the unitisation measures were unlawful as they did not satisfy the substantive and procedural requirements under the applicable Ghanaian laws and regulations as well as international principles and best practices. They impugn the unitisation measures as violative of the stabilization regime contained in the Petroleum Agreement. The Claimants seek damages primarily based on the loss of the future income under the Petroleum Agreement.

5. The Respondents oppose the claims. They submit that the unitisation was substantively and procedurally justified as confirmed by competent Ghanaian courts. According to the Respondents, this Tribunal owes a considerable deference to the policy decisions of the MoE and to the judicial determinations of the Ghanaian courts. In addition, according to the Respondents, the Claimants' damages claim is inadmissible as they

have failed to prove that the unitisation measures, which have not yet been enforced, caused any actual harm. In any event, the Respondents contend that the Claimants' quantification of their alleged loss is based on unsupported assumptions and should be discarded as unreliable. Finally, the Respondents counterclaim for violations of the Petroleum Agreement resulting from the Claimants' alleged defiance of the lawful unitisation measures.

B. THE PARTIES AND THEIR REPRESENTATIVES

1. The Claimants

6. The Claimants are Eni and Vitol, companies incorporated and existing under the laws of Ghana at the following addresses:

Eni Ghana Exploration and Production Limited
Bradley Tower Building, William Tubman Road, Ridge
PMB KA 185 – Accra
Ghana

Vitol Upstream Ghana Limited
Grand Oyeeman Building, Liberation Road, 5th Floor, Airport Commercial Area
KIA 9448 – Accra
Ghana

7. The Claimants are represented in this arbitration by the following attorneys of Herbert Smith Freehills LLP:

Craig Tevendale

Andrew Cannon

Charlie Morgan

Jerome Temme

Rutger Metsch

Arushie Marwah

Herbert Smith Freehills LLP
Exchange House, Primrose Street
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Tel: +44 20 7374 8000
Fax: +44 20 7374 0888
Email: Craig.Tevendale@hsf.com
Andrew.Cannon@hsf.com
Charlie.Morgan@hsf.com

2. The Respondents

8. The Respondents are Ghana, a sovereign State, and GNPC, a Ghanaian State-owned company. The Respondents' addresses are as follows:

The Republic of Ghana
c/o Minister of Energy
Ministry for Energy, Private Mail Bag, Ministry Post Office, Accra
Ghana
Tel: +233 21 667151-3
Fax: +233 21 668262
FAO: Minister of Energy

Ghana National Petroleum Corporation
Petroleum House, Harbour Road, Private Mail Bag, Tema
Ghana
Tel: +233 22 204726
Fax: +233 22 202854
FAO: Managing Director

9. The Respondents are represented in this arbitration by the following attorneys of Foley Hoag LLP:

Clara Brillembourg

Tafadzwa Pasipanodya

Peter Shults

Sun Young Hwang

Celine Pommier

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Email: chioureas@foleyhoag.com

C. THE TRIBUNAL

10. The Tribunal is composed of:

Prof. Gabrielle Kaufmann-Kohler (President of the Tribunal)
LÉVY KAUFMANN-KOHLER
3-5 rue du Conseil-Général
P.O. Box 552
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Tel: +41 22 809 62 00
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Ms. Judith Gill KC (Co-Arbitrator)
GILL ARBITRATION SERVICES PTE. LTD.
81A Clemenceau Avenue
#05-18, UE Square
Singapore 239918
Tel: +65 9009 6257
Email: jgill@judithgill.com

Prof. Dr. Mohamed Abdel Wahab (Co-Arbitrator)
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8th Floor 2005A Corniche El Nil Street,
Ramlet Beaulac
Cairo, 11221
Egypt
Tel: +20(2) 24612-160
Email: msw@zulficarpartners.com

11. With the consent of the Parties, the Arbitral Tribunal appointed as Secretary to the Tribunal:

Dr. David Khachvani
LÉVY KAUFMANN-KOHLER
3-5 rue du Conseil-Général
P.O. Box 552
1211 Geneva 4
Switzerland
Tel: +41 22 809 62 00
Email: david.khachvani@lk-k.com

D. ARBITRATION AGREEMENT

12. The Claimants initiated this arbitration on the basis of Article 24 of the Petroleum Agreement (the "Arbitration Agreement"), which reads as follows:

> CONSULTATION, ARBITRATION AND INDEPENDENT EXPERT
>
> 24.1 Except in the cases specified in Article 26.4 any dispute or difference arising between the State and GNPC or either of them on one hand and Contractor on the other hand in relation to or in connection with or arising out of any terms and conditions of this Agreement shall be resolved by consultation and negotiation. In the event that no agreement is reached

within thirty (30) days after the date when either Party notifies the other that a dispute or difference exists within the meaning of this Article or such longer period specifically agreed to by the Parties, any Party shall have the right subject to Article 24.8 to have such dispute or difference settled through international arbitration under the auspices of the Arbitration Institute of the Stockholm Chamber of Commerce, Stockholm, Sweden.

24.2 The tribunal shall consist of three (3) arbitrators. Each Party to the dispute shall appoint one (1) arbitrator and those so appointed shall designate an umpire arbitrator. If a Party's arbitrator and/or the umpire arbitrator is not appointed within the periods provided in the rules referred to in Article 24.5 below, such Party's arbitrator and/or the umpire arbitrator shall at the request of any Party to the dispute be appointed by the Arbitration Institute of the Stockholm Chamber of Commerce.

24.3 No arbitrator shall be a citizen of the home country of any Party hereto, and shall not have any economic interest or relationship with any such Party.

24.4 The arbitration proceedings shall be conducted in Stockholm, Sweden, or at such other location as selected by the arbitrators unanimously. The proceedings shall be conducted in the English language.

24.5 The arbitration tribunal shall conduct the arbitration in accordance with the arbitration rules of the United Nations Commission on International Trade Law ("UNCITRAL") of December 15, 1976, except as provided in this Article. For purposes of Article 33.1 of said UNCITRAL rules, the arbitration tribunal shall apply the governing law and the provisions of this Agreement in determining the dispute.

24.6 If the opinions of the arbitrators are divided on issues put before the tribunal, the decision of the majority of the arbitrators shall be determinative. The award of the tribunal shall be final and binding upon the Parties.

24.7 The right to arbitrate disputes arising out of this Agreement shall survive the termination of this Agreement.

24.8 In lieu of resorting to arbitration, the Parties to a dispute arising under this Agreement, including the Accounting Guide, may by mutual agreement refer the dispute for determination to a Sole Expert to be appointed by the Parties. In such case, the Parties shall agree on the relevant qualifications of the Sole Expert, the terms of reference for such proceeding, the schedule of presentation of evidence and testimony of witnesses, and other procedural matters. The decision of the Sole Expert shall be final and binding upon the Parties. The Sole Expert shall have ninety (90) days afier his appointment to decide the case, subject to any extensions mutually agreed to by the Parties to the dispute. Upon failure of the Sole Expert to decide the matter within the ninety (90) day period (or any extension thereof), any Party may call for arbitration under Article 24.1 above.

24.9 Each Party to a dispute shall pay its own counsel and other costs, however, costs of the arbitration tribunal shall be allocated in accordance with the decision of the tribunal. The costs and fees of the Sole Expert shall be borne equally by the Parties to the dispute.

E. SEAT AND HEARING VENUE

13. Pursuant to paragraph 8.1 of the Terms of Appointment dated 28 December 2021 executed by the Parties and the Tribunal (the "ToA"), the place of the arbitration, in the sense of legal seat, is Stockholm, Sweden.

14. After consultation of the Parties, the Tribunal has held hearings in Paris, France, and by videoconference.

F. LANGUAGE

15. Pursuant to paragraph 9.1 of the ToA, the language of the present proceedings is English.

G. GOVERNING PROCEDURAL RULES

16. As set out in paragraph 11.1 of the ToA, the procedure in this arbitration is governed by (in the following order of precedence):

    1. the mandatory rules of the law on international arbitration applicable at the seat of the arbitration;
    2. the ToA;
    3. the UNCITRAL Rules and the SCC Procedures for UNCITRAL Cases;
    4. and Procedural Order No. 1 dated 16 February 2022.

H. GOVERNING SUBSTANTIVE LAW

17. Article 26(1) of the Petroleum Agreement contains the following choice of law provision:

> This Agreement and the relationship between the State and GNPC on one hand and Contractor on the other shall be governed by and construed in accordance with the laws of the Republic of Ghana consistent with such rules of international law as may be applicable, including rules and principles as have been applied by international tribunals.

18. As agreed by the Parties in paragraph 10.2 of the ToA, "[t]he Parties shall, in principle, establish the content of the applicable law, while the Tribunal may, but is not required to make its own inquiries into the applicable law, provided that it does not decide the dispute based on a legal principle which was not pleaded by the Parties and the relevance of which could not reasonably have been anticipated."

I. REQUESTS FOR RELIEF

1. The Claimants

19. The Claimants formulated their final request for relief in the Reply Post-Hearing Brief ("Reply PHB") as follows:

> The Claimants respectfully request the Tribunal to grant the following relief to the Claimants against the Respondents on a joint and several basis or as the Tribunal otherwise sees fit:
>
> (a) DECLARE that the First Respondent breached the Petroleum Agreement by virtue of its conduct in issuing and/or refusing to withdraw or prevent reliance by third parties on the Unitisation Directives;
>
> (b) DECLARE that the Second Respondent breached the Petroleum Agreement by virtue of its conduct in support of the First Respondent's issuance and/or refusal to withdraw or prevent reliance by third parties on the Unitisation Directives;
>
> (c) ORDER that the First Respondent notify the High Court, Court of Appeal and Supreme Court of Ghana that the Unitisation Directives were issued in breach of the Petroleum Agreement;
>
> (d) ORDER that the First Respondent notify Springfield that the Unitisation Directives were issued in beach of the Petroleum Agreement;
>
> (e) ORDER the Respondents to pay damages in an amount of USD 915.8 million (or such other amount as the Tribunal sees fit) for the losses suffered by the Claimants arising out of the Respondents' breaches of the Petroleum Agreement;
>
> (f) ORDER the Respondents to pay all of the costs and expenses of this Arbitration, including the fees and expenses of the Claimants' counsel and any witnesses and/or experts in the arbitration, the fees and expenses of the Tribunal and the fees of the SCC;
>
> (g) ORDER the Respondents to pay compound interest on any and all sums awarded to the Claimants at a rate and at such rests as the Tribunal may consider appropriate, both in relation to the periods prior to and after the issuance of a Final Award;
>
> (h) DISMISS all relief sought by the Respondents; and
>
> (i) DECLARE or ORDER such further or other relief to the Claimants as the Tribunal may consider appropriate.[1]

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1 Claimants' Reply PHB, ¶ 104 (footnotes omitted).

2. The Respondents

20. The Respondents formulated their final request for relief in their post-hearing brief ("PHB") as follows:

> For the reasons set forth herein, as well as in Respondents' prior written and oral pleadings, Respondents respectfully request that the Tribunal issue an Award finding, ordering, and declaring that:
>
> a. Respondents have not breached any obligation owed to Claimants and Claimants' claims are denied in their entirety with prejudice;
>
> b. Should Respondents be found to have breached any obligation owed to Claimants, (1) Claimants' request for damages is denied with prejudice in its entirety because it is inadmissible or otherwise impermissible, and (2) Claimants' request for damages is denied because Claimants have not met their burden to prove actual loss proximately caused by Respondents;
>
> c. Claimants have breached the OCTP Petroleum Agreement;
>
> d. As a result of Claimants' breach of the OCTP Petroleum Agreement, damages are due to Respondents in an amount of US$ 84.15 million (or such other amount as the Tribunal sees fit) to compensate Respondents for the loss sustained as a result of Claimants' breach;
>
> e. Claimants are ordered to pay simple interest on any and all sums awarded to Respondents at the prevailing Bank of Ghana interest rate;
>
> f. Claimants are ordered to adhere to the Minister of Energy's lawfully-issued Directives, including the April 2020, October 2020, and November 2020 Directives;
>
> g. Claimants are ordered to pay all costs and expenses related to this arbitration, including but not limited to the fees and expenses of the Tribunal, the administrative fees and expenses of the Stockholm Chamber of Commerce, and all costs of Respondents' legal representation, witnesses, and expert assistance;
>
> h. Respondents are entitled to and granted any other or additional relief as may be appropriate under the circumstances or as may otherwise be just and proper; and
>
> i. All relief sought by Claimants is dismissed.[2]

[2] Respondents' PHB, ¶ 407.

II. PROCEDURAL HISTORY

A. INITIAL STEPS AND THE CONSENT AWARD

21. On 16 August 2021, the Claimants filed the Notice of Arbitration ("NoA") against the Respondents pursuant to Article 3 of the UNCITRAL Rules. The Claimants appointed Ms. Judith Gill KC as arbitrator.

22. On the same date, the Claimants requested the SCC to act as the administering and appointing authority in this arbitration pursuant to Article 24 of the Petroleum Agreement and to apply the SCC Procedures for UNCITRAL Cases.

23. On 15 September 2021, the Respondents appointed Prof. Dr. Mohamed Abdel Wahab as arbitrator and agreed with the Claimants' proposal to adopt the SCC Procedures for UNCITRAL Cases.

24. On 15 October 2021, Prof. Dr. Mohamed Abdel Wahab and Judith Gill KC wrote to the SCC that they had agreed to appoint Prof. Gabrielle Kaufmann-Kohler as presiding arbitrator. On 19 October 2021, the SCC confirmed the appointment of the presiding arbitrator.

25. On 20 October 2021, the SCC notified the Tribunal pursuant to Article 10 of the SCC Procedures for UNCITRAL Cases that the Tribunal had been constituted and the Parties had paid the advances on costs in full.

26. On 6 December 2021, the Parties and the Tribunal held an initial procedural hearing in which they agreed on the Terms of Appointment ("ToA") and discussed the Procedural Order No. 1, including the procedural calendar.

27. On 10 December 2021, the Tribunal gave the Parties leave to raise objections to the ToA and specific dates in the procedural calendar by 15 December 2021. After various exchanges, on 15 February 2022, the Tribunal stated its agreement with the changes to the procedural calendar, which the Claimants had submitted on the same day and to which the Respondents had consented on that same day.

28. On 28 December 2021, the Parties and the Tribunal executed the ToA.

29. On 11 February 2022, the Claimants informed the Tribunal that they had entered into a confidentiality agreement in respect of certain data to be shared by the Respondents with the Claimants. The communication attached the confidentiality agreement, which

required the Claimants to submit a confidentiality undertaking to the Tribunal only whenever sharing the defined confidential data with any of their personnel, advisors, witnesses or experts. The confidentiality agreement also required the Tribunal to provide copies of such undertakings to the Respondents upon final determination of the arbitration.

30. On 16 February 2022, the Tribunal issued Procedural Order No. 1, which included the procedural calendar as Annex 1.

31. On 30 March 2022, the Claimants informed the Tribunal that the Parties wished to formalize an agreement, related to certain undertakings of the Respondents, in the form of a consent award. The Respondents confirmed the intention to formalize such an agreement the subsequent day. After a brief exchange between the Parties on the wording of the consent award, the Tribunal circulated a draft consent award on 11 April 2022.

32. On 13 April 2022, the Parties confirmed that they had no objections to the issuance of the consent award as circulated in draft form by the Tribunal.

33. On 14 April 2022, the Tribunal issued the Consent Award.

B. WRITTEN SUBMISSIONS AND DOCUMENT PRODUCTION

34. On 7 April 2022, whilst the Parties and the Tribunal finalized the Consent Award, the Claimants filed the Statement of Claim ("SoC"), together with:

i. Factual exhibits from C-1 to C-168;

ii. Legal authorities CLA-1 to CLA-4;

iii. Witness statements of Mr. Giuseppe Valenti, Mr. John-Paul Stalder, Ms. Maria Claudia Perini, Mr. Andrew Lewis and Mr. James Thorburn;

iv. An expert report by Mr. Matthew Wilks of SLR Consulting.

35. On 8 September 2022, the Respondents filed the Statement of Defense ("SoD") , together with:

i. Factual exhibits from R-1 to R-84;

ii. Legal authorities RLA-1 to RLA-69;

iii. Witness statements of Messrs. Andrew Mercer, Michael Nii Armah Aryeetey and Benjamin Owusu-Ansah;

iv. Expert reports by Dr. Stephen Wright of Gaffney, Cline & Associates Limited ("GCA") and Mr. Anthony Djokoto of Equator Law.

36. On 21 September 2022, the Claimants informed the Tribunal that the Parties had reached an agreement on certain amendments to the procedural calendar, extending the time limits for the exchange of document production requests and the voluntary production of documents.

37. On 22 September 2022, the Tribunal confirmed the agreed extensions, maintaining the rest of the procedural calendar unchanged.

38. Between 23 September 2022 and 26 October 2022, the Parties exchanged their respective requests for document production, objections to the requests, and replies.

39. On 28 October 2022, the Claimants informed the Tribunal that the Parties had agreed for their experts in the same or similar disciplines to narrow down the issues involved in their evidence in a separate meeting. The first of such meetings, to potentially result in a joint statement, would be held between Mr. Wilks and Dr. Wright, who would endeavor to reach an agreement by 15 December 2022. The Tribunal took note of the proposal.

40. Meanwhile, on 26 October 2022, the Claimants informed the Tribunal that Springfield had made an application before the Ghanaian High Court to imprison six representatives of the Claimants, including two of the Claimants' witnesses.

41. On 27 October 2022, the Tribunal invited the Respondents to comment on the Claimants' email by 1 November 2022, if it so wished, noting that the Claimants' communication was not worded as a request to the Tribunal.

42. On 1 November 2022, the Respondents submitted a response, which included factual explanations on the issues raised by the Claimants.

43. On 3 November 2022, the Tribunal took note of the Respondents' letter and considered the matter closed for the time.

44. On 16 November 2022, the Tribunal issued Procedural Order No. 2, together with Annexes 1 and 2, setting out its decision on the Parties' disputed document production

requests and establishing a procedure for the production of documents that contained sensitive or privileged information. Specifically, the producing Party which claimed privilege was permitted to produce redacted documents, together with a privilege log in the form of Annex 3. Any redactions to which the other Party objected would be resolved by the Tribunal. The time limit for the production of documents was set on 7 December 2022.

45. On 18 November 2022, the Claimants requested clarifications regarding Procedural Order No. 2 and Annex 3. On 21 November 2022, the Tribunal provided the clarifications. On the same day, the Respondents asked the Tribunal to expand on a specific production decision, which the Tribunal did on 23 November 2022.

46. On 5 December 2022, the Claimants notified the Tribunal that the Parties had agreed to extend the time for production of documents until 16 December 2022. The following day, the Tribunal granted the extension.

47. Between 26 December 2022 and 6 January 2023, the Parties discussed alleged deficiencies in the Claimants' document production. On 9 January 2023, the Tribunal gave certain indications in relation to the concerns raised and invited the Parties to seek to reach an agreement by 16 January 2023.

48. On 12 January 2023, upon a question of the Tribunal, the Respondents on behalf of the Parties informed the Tribunal that the experts Mr. Wilks and Dr. Wright had met and were discussing the relevant issues. Nonetheless, on 21 January 2023, the Respondents further noted that the experts were unable to agree a joint statement.

49. On 31 January 2023, the Claimants complained about issues in the Respondents' document production. The Respondents answered on the same day, specifying that they were planning to address such issues by the end of the day. On the same day, the Tribunal gave the Parties directions in respect of the alleged deficiencies in the Respondents' document production.

50. On 6 February 2023, after further exchanges between the Parties, the Tribunal wrote to Parties addressing the unresolved document production issues, requesting the Respondents to provide the Claimants with a detailed description of their search efforts for certain documents by 10 February 2023.

51. On 7 February 2023, the Claimants submitted the Statement of Reply (the "Reply"), together with Appendixes 1 to 3, containing the Statement of Facts, Chronology of Key

Dates and List of Issues. Together with the Reply, the Claimants filed the following evidence:

i. Factual exhibits C-169 to C-233;

ii. Legal authorities CLA-5 to CLA-102;

iii. Second witness statements of Mr. Giuseppe Valenti, Mr. John-Paul Stalder, Ms. Maria Claudia Perini, Mr. Andrew Lewis and Mr. James Thorburn;

iv. A second expert report by Mr. Matthew Wilks of SLR Consulting and expert reports by Prof. Raymond A. Atuguba and Dr. Stuart Amor.

52. On 10 February 2023, the Respondents confirmed to the Tribunal that they had provided the detailed description of their search efforts as requested by the Tribunal. In response, on 15 February 2023, the Claimants stated that the Respondents had not complied with the Tribunal's order and requested the Tribunal to draw adverse inferences. The Tribunal took note of the Parties' communications.

53. On 23 February 2023, the Respondents objected to the Claimants' privilege log. Upon the invitation of the Tribunal, the Claimants answered on 3 March 2023. On 9 March 2023, the Tribunal dismissed the Respondents' objections.

54. On 13 June 2023, the Respondents filed the Statement of Rejoinder (the "Rejoinder"), together with a chronology of key dates in Annex 1 and a list of disputed issues in Annex 2. Together with the Rejoinder, the Respondents filed the following evidence:

i. Factual exhibits R-85 to R-165;

ii. Legal authorities RLA-70 to RLA-118;

iii. Witness statements of Hon. Andrew Mercer, second witness statement of Mr. Michael Nii Armah Aryeetey, and the second witness statement of Mr. Benjamin Owusu-Ansah;

iv. Second expert reports by Dr. Stephen Wright of GCA and by Mr. Anthony Djokoto of Equator Law, as well as expert reports by Prof. Ernest Kofi Abotsi of the Law School of the University of Professional Studies and by Dr. Daniel Flores of Quadrant Economics.

C. HEARING

55. On 26 June 2023, each Party identified the witnesses and experts of the opposing party for cross-examination.

56. On 29 June 2023, the Tribunal circulated a draft Procedural Order No. 3, which set out the rules governing the conduct of the hearing, and invited the Parties to comment.

57. On 5 July 2023, the Claimants informed the Tribunal that the Parties had agreed to introduce 17 new documents to the record, some of which were subject to a protective order allowing for their use in the present arbitration, provided that these documents remained confidential. The Respondents confirmed their agreement on the same day.

58. On 6 July 2023, the Parties provided their joint comments on draft Procedural Order No. 3 and proposed to vacate the pre-hearing conference scheduled for 10 July 2023.

59. On 7 July 2023, the Tribunal granted leave to the Parties to file the new documents agreed upon by 10 July 2023, with time for observations on the documents filed being set on 17 July 2023. On the same day, the Tribunal issued Procedural Order No. 3, adopting the draft agreed by the Parties, and vacated the pre-hearing conference.

60. On 10 July 2023, the Claimants on behalf of the Parties filed the 17 new documents – Exh. C-234 to C-249 and Exh. R-166.

61. On 11 July 2023, with the consent of the Respondents, the Claimants filed an *errata* sheet regarding the expert report of Mr. Amor.

62. On 12 July 2023, the Claimants informed the Tribunal that the Parties had agreedthat the Claimants would introduce four new documents into the record. The Tribunal accepted these documents to be filed by 14 July 2023, with time for observations on the documents set on 20 July 2023.

63. On 14 July 2023, the Claimants filed Exhs. C-250 to C-253.

64. On 17 July 2023, in response to the additional documents filed by the Claimants on 10 July 2023, the Respondents filed Exh. R-167 and, in response to the additional document filed by the Respondents on 10 July 2023, the Claimants filed Exhs. C-254 to C-257.

65. On 18 July 2023, the Claimants informed the Tribunal that the Parties had agreed to submit five further documents. The Tribunal authorized such filing by 20 July 2023 and provided for an opportunity to submit observations by 24 July 2023. On the same day, the Respondents refiled Exh. R-51, which was previously incomplete.

66. On 19 July 2023, the Claimants filed Exhs. C-258 to C-262.

67. On 24 July 2023, with the consent of the Claimants, the Respondents filed an updated version of the first expert report by Quadrant Economics, following the *errata* of the expert report of Dr. Stuart Amor filed by the Claimants.

68. On 28 July 2023, the Claimants informed the Tribunal that the Parties had agreed to introduce an additional document in the record, which the Respondents confirmed. The Tribunal admitted the additional document into the record on the same day. Thus, on 29 July 2023, the Claimants filed Exh. C-263. The Respondents made no comments on the new document.

69. A hearing was held from 31 July 2023 to 7 August 2023 at the Hotel Napoleon in Paris, France (the "Hearing"). On 2 August 2023, following the witness testimony of Giuseppe Valenti on the second day of the Hearing, the Claimants filed Exh. C-43.1 (which is an attachment referred to in Exh. C-43). On 5 August 2023, the Respondents filed an additional document, upon leave granted by the Tribunal the day before (Exh. R-168).

D. POST-HEARING STEPS

70. On 11 August 2023, the Tribunal issued Procedural Order No. 4, providing directions in respect of the post-hearing procedure.

71. On the same day, the Respondents informed the Tribunal that they did not intend to file any documents responsive to the new exhibits submitted by the Claimants during the Hearing. The Claimants stated that they intended to submit observations and responsive documents relating to Exh. R-168, filed by the Respondents during the Hearing, by 18 August 2023 as mandated by the Tribunal.

72. Accordingly, on 18 August 2023, the Claimants filed their observations, as well as Exh. C-264 to C-272.

73. On 23 August 2023, the Claimants informed the Tribunal that the Parties had agreed to introduce two additional legal authorities in the record and the Respondents

confirmed their agreement. On the following day, the Tribunal granted leave to the Claimants to introduce the legal authorities, also granting the Respondents one week to submit responsive documents and observations. On 24 August 2023, the Claimants submitted legal authorities CLA-103 and CLA-104.

74. On 29 August 2023, the Respondents informed the Tribunal that they did not intend to file additional legal authorities in response.

75. On 21 September 2023, the Claimants submitted the final versions of the transcripts of the Hearings as agreed by the Parties.

76. On 13 October 2023, the Claimants and the Respondents filed their PHBs. The Claimants' PHB contained an Annex 1 and attached legal authorities CLA-105 to CLA-137. The Respondents accompanied their PHB with legal authorities RLA-119 to RLA-172.

77. On 21 October 2023, the Respondents objected to the scope of the model damages interface filed with the Claimants' PHB. The Claimants provided their response on 24 October 2023. On 8 November 2023, the Tribunal informed the Parties that, should it require an active damages model, it would request the Parties to provide joint input from both experts, for which it would provide relevant specifications.

78. On 3 November 2023, the Parties filed their Reply PHBs. With their Reply PHB, the Claimants submitted legal authorities CLA-138 to CLA-142 and the Respondents legal authorities RLA-27bis and RLA-173 to RLA-188.

79. On 10 November 2023, the Parties filed their submissions on costs.

80. On 10 June 2024, the Tribunal declared the proceedings closed.

81. On 2 July 2024, the SCC determined the costs of arbitration.

III. FACTS

82. This section summarizes the factual background of the dispute that gave rise to this arbitration. It does not purport to be exhaustive and is meant to provide a general overview of the key facts and factual allegations to put the Tribunal's analysis in proper context.

A. BACKGROUND OF THE CLAIMANTS' INVESTMENT IN GHANA

1. The development of the contract areas

83. The early 2000s saw an intensification of the exploration for offshore commercial hydrocarbons, including in Ghana. In this context, Ghana opened various offshore blocks to carry out petroleum-related operations during those years.[3] Some of these blocks lay in the OCTP and WCTP areas.[4]

84. The OCTP area is an area located approximately 60 kms offshore from Ghana's western coast.[5] It includes oil fields and non-associated gas ("NAG") fields.[6] NAG is natural gas that, unlike associated gas, is produced from a well that is not associated with liquid hydrocarbons.[7]

85. The project for the development of the resources in the OCTP (the "OCTP Project") involves both types of fields, i.e. oil and NAG. Particularly, it comprises two oil fields (Sankofa East Cenomanian and Sankofa East-2-A Campanian reservoirs) and three NAG fields (Sankofa Main, Sankofa East and Gye Nyame).[8] The operations of the OCTP Project are carried out through the use of a shared floating, production, storage and offloading vessel ("FPSO") which processes both natural gas and crude oil.

86. The WCTP area is located adjacent to the OCTP area. It consists of several blocks, out of which Block 1 ("WCTP1") and Block 2 ("WCTP2") are most relevant to the dispute. Initially, Kosmos Energy Ghana Limited ("Kosmos") held an exploration license for these areas. However, Kosmos relinquished the areas, following the expiration of its exploration license in July 2011.[9] Prior to the relinquishment, Kosmos made two oil discoveries, Banda and Odum, in WCTP2 (the "WCTP2 Existing Discoveries").

87. Around the time of the relinquishment of parts of the WCTP area, the rights that Eni held by virtue of a petroleum agreement in other areas located east of the WCTP area

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3 SoD, ¶ 17.

4 Exh. R-81, Petroleum Commission Website, Ghana Offshore Activity Maps, 23 August 2022.

5 NoA, ¶ 18; SoD, ¶ 17.

6 NoA, ¶ 18; SoD, ¶ 36.

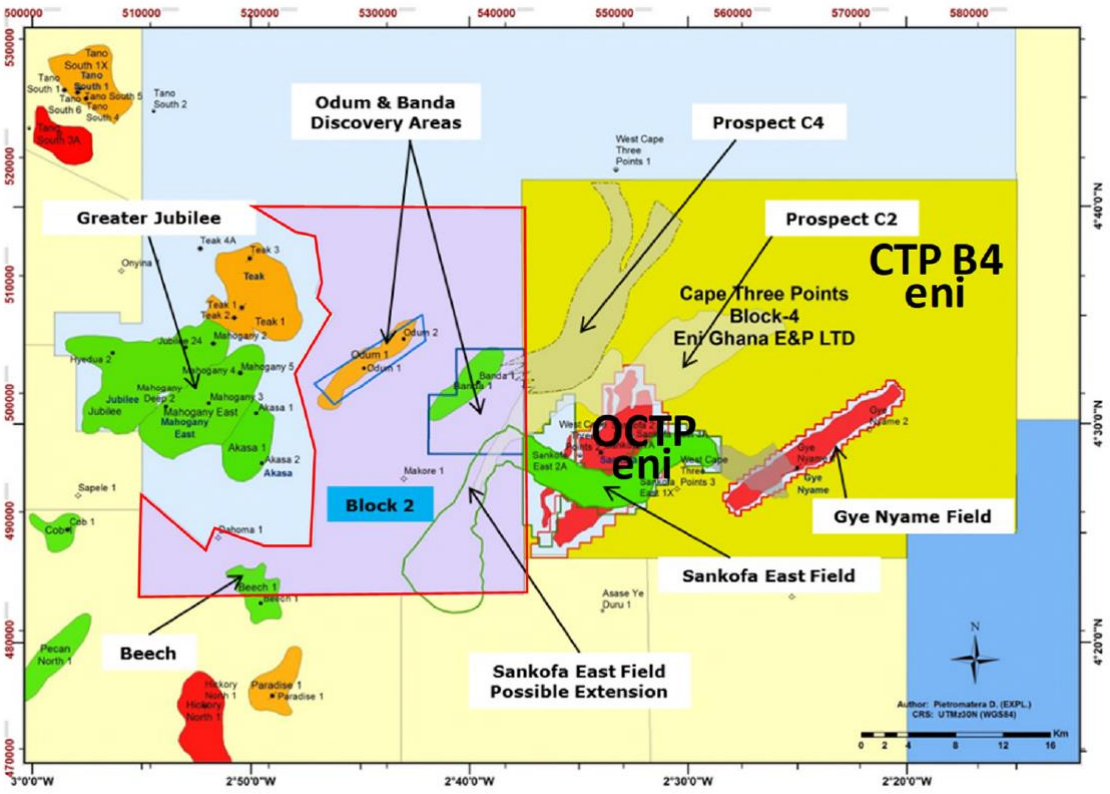
7 Exh. C-1, Petroleum Agreement 2 March 2006, Article 1.46.

8 NoA, ¶ 18; SoD, ¶ 36; Exh. C-2, OCTP Integrated Plan of Development, Phase-1 (Oil), December 2014, s. 4.4.

9 NoA, ¶ 32; SoD, ¶ 39, referring to Exh. R-12, Report of the Select Committee on Mines and Energy on the Petroleum Agreement, March 2016, p. 2; first witness statement of Mr. Michael Nii Armah Aryeetey ("Aryeetey WS1") ¶ 19.

thus far operated by Kosmos and north of the OCTP area also expired.[10] These areas were consequently relinquished as well and became two new contract blocks, Block 3 and Block 4.[11]

88. The following map shows the location of the OCTP and WCTP blocks, including the area at the core of this dispute, referred to in the map as the "Sankofa East Field Possible Extension":[12]



89. As explained below, due to their potential for hydrocarbon exploitation, both the OCTP and the WCTP areas are the subject of petroleum agreements concluded between the Ghanaian government and several companies for the exploration, development and production of these contract areas.

10 Aryeetey WS1, ¶ 19.

11 Aryeetey WS1, ¶ 19.

12 Exh. R-93, Informational Memorandum for CO/Exp and CO/Ups, Ghana Offshore Tano Basin – Farm-in Opportunity in West Cape Three Points Block 2, 17 July 2016, p. 1.

2. The petroleum agreements

a. Conclusion of the petroleum agreements

i. The OCTP Petroleum Agreement

90. In 2005, the company Atlantic Energy Bermuda Ltd, which later became Heliconia, applied through its local affiliate Atlantic Petroleum Ghana Ltd for exploration and production rights over the OCTP area. Ghana subsequently awarded such rights to Heliconia and, on 2 March 2006, Heliconia, GNPC and Ghana, represented by its MoE, entered into the Petroleum Agreement.[13] On 15 March 2006, the Parliament of Ghana ratified the Petroleum Agreement.[14]

91. By virtue of the Petroleum Agreement, Heliconia and GNPC were to jointly explore, develop and produce petroleum in the OCTP area as delimited in Annex 1 to the Petroleum Agreement.[15] The Petroleum Agreement also provided that Heliconia would hold operatorship and a participating interest of ninety percent (90%) in the operations under the agreement, whereas GNPC had a ten percent (10%) initial interest.[16]

92. On 17 October 2007, Heliconia changed its denomination to "Vitol Upstream Ghana Limited".[17]

93. On 3 August 2009, GNPC increased its participating interest in the operations under the Petroleum Agreement from ten percent (10%) to 15 per cent (15%) by virtue of a letter agreement with Vitol. In turn, Vitol's participating interest was reduced to 85 per cent (85%).[18]

94. On 30 September 2009, Eni acquired a majority interest and operatorship under the Petroleum Agreement from Vitol.[19] In particular, Eni acquired a 47.222% participating interest in all the operations and rights under the Petroleum Agreement. For its part,

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13 Exh. C-1, Petroleum Agreement, 2 March 2006.

14 Exh. C-2, OCTP Integrated Plan of Development, Phase-1 (Oil), December 2014, s. 4.4.

15 Exh. C-1, Petroleum Agreement, 2 March 2006, Articles 1.16, 2.1 and Annex 1.

16 Exh. C-1, Petroleum Agreement, 2 March 2006, Articles 1.47, 2.4 and 2.12.

17 Exh. C-67, Heliconia's change of name to Vitol, 17 October 2007.

18 Exh. C-70, Assignment Deed between Vitol and Eni, 30 September 2009, Whereas D.

19 Exh. C-70, Assignment Deed between Vitol and Eni, 30 September 2009.

Vitol maintained a 37.778% participating interest, while GNPC held the remaining 15%.[20]

95. On 10 October 2013, GNPC exercised its right to acquire a five percent (5%) participating interest in addition to its previous participating interest of fifteen percent (15%).[21] This led to a current participating interest of the parties to the Petroleum Agreement distributed as follows: (i) Eni's interest amounts to 44.444%; (ii) Vitol's interest amounts to 35.556%M; and (iii) GNPC's interest amounts to 20%.[22]

ii. The WCTP2 Petroleum Agreement

96. In December 2013, following the relinquishment by the former partners of the areas comprising WCTP1 and WCTP2, the MoE opened such blocks in the WCTP area, as well as Blocks 3 and 4 that had become available, for petroleum operations.[23]

97. The following year, several companies applied for the available blocks. Among them, Vitol applied with another company for exploration and production rights over both the WCTP and OCTP relinquished areas. However, the MoE informed Vitol that it was only able to consider its application for Block 4 of the WCTP area.[24]

98. Similarly, in June 2014, a Ghanaian company, Springfield Exploration & Production Limited ("Springfield"), applied for WCTP1 and WCTP2 together with a Nigerian company, Talaveras Limited. In an initial response to the application, the MoE observed that Springfield should have applied for WCTP2 only, and that its proposed collaborator did not fulfill the requirements established by Ghana.[25]

99. Following the MoE's response to its first application for WCTP1 and WCTP2, in October 2014 Springfield applied for WCTP2 in collaboration with Vaalco Energy, Inc. ("Vaalco"), a United States company.[26]

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20 Exh. C-70, Assignment Deed between Vitol and Eni, 30 September 2009, Article 1.

21 Exh. C-2, OCTP Integrated Plan of Development, Phase-1 (Oil), December 2014, s. 4.4.

22 Exh. C-2, OCTP Integrated Plan of Development, Phase-1 (Oil), December 2014, s. 4.4.

23 Exh. R-12, Report of the Select Committee on Mines and Energy on the Petroleum Agreement, March 2016, p. 3.

24 Exh. R-9, Letter from the MoE to Vitol, 18 December 2014.

25 Exh. R-12, Report of the Select Committee on Mines and Energy on the Petroleum Agreement, March 2016, pp. 2-3.

26 Exh. R-12, Report of the Select Committee on Mines and Energy on the Petroleum Agreement, March 2016, p. 3.

100. Vaalco later withdrew from the application, after which Springfield was awarded the relevant petroleum agreement and the operatorship of WCTP2.[27] Therefore, on 26 July 2016, Ghana, GNPC, GNPC's exploration arm GNPC Exploration & Production Company Ltd ("GNPC Exploration") and Springfield entered into the Petroleum Agreement in respect of West Cape Three Points Block 2 (the "WCTP2 Petroleum Agreement").[28] In light of Vaalco's withdrawal, the WCTP2 Petroleum Agreement required Springfield to assign a portion of its interest to a technical partner and joint operator within the 12 months following the conclusion of the agreement.[29] However, Ghana subsequently waived this requirement, first on a temporary basis in August 2017 and later permanently in August 2020.[30]

101. Further, the WCTP2 Petroleum Agreement assigned an interest to GNPC and GNPC Exploration. In particular, the agreement provides the following interest distribution: (i) for WCTP2 Existing Discoveries, Springfield holds an 82% interest whereas GNPC and GNPC Exploration hold the remaining 18%; and (ii) for any new discoveries, Springfield holds an 84% interest whereas GNPC and GNPC Exploration hold the remaining 16%.[31]

102. In the event of a declaration of commerciality of a discovery in WCTP2, the WCTP2 Petroleum Agreement also grants GNPC the option to acquire a further 5% interest in relation to WCTP2 Existing Discoveries or a 17% interest in relation to new discoveries.[32]

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27 Exh. R-10, Letter from Vaalco to the MoE, 15 October 2015.

28 Exh. C-8, WCTP2 Petroleum Agreement, 26 July 2016.

29 Exh. C-8, WCTP2 Petroleum Agreement, 26 July 2016.

30 Exh. R-19, Letter from the MoE to Springfield, 18 August 2017; Exh. R-43, Letter from the MoE to Springfield, 18 August 2020.

31 Exh. C-8, WCTP2 Petroleum Agreement, 26 July 2016.

32 Exh. C-8, WCTP2 Petroleum Agreement, 26 July 2016, Article 2.5.

b. Relevant provisions of the petroleum agreements

i. The OCTP Petroleum Agreement

103. Article 2 of the Petroleum Agreement determines the subject of the agreement and provides for the operator's obligation to carry out the petroleum operations in the following terms:

> 2.1 This Agreement provides for the Exploration for and Development and Production of Petroleum in the Contract Area by GNPC in association with Contractor.
>
> 2.2 Subject to the provisions of this Agreement, Contractor shall be responsible for the execution of such Petroleum Operations as are required by the provisions of this Agreement and subject to Article 9, is hereby appointed the exclusive entity to conduct Petroleum Operations in the Contract Area. GNPC shall at all times participate in the management of Petroleum Operations and in order that the Parties may cooperate in the implementation of Petroleum Operations GNPC and Contractor shall establish a Joint Management Committee, to conduct and manage Petroleum Operations.

104. Article 4(2), which enshrines GNPC's obligation to provide to the contractor upon request any information relevant to the exploration operations in the OCTP area, reads as follows:

> 4.2 GNPC shall, at the request of Contractor, make available to it such records and information relating to the Contract Area as are relevant to the performance of Exploration Operations by Contractor and are in GNPC's possession, provided that Contractor shall reimburse GNPC for the costs reasonably incurred in procuring or otherwise making such records and information available to Contractor.

105. Article 6(1) refers to the terms for cooperation between the Parties in the implementation of the operations thereunder, as follows:

> 6.1 In order that the Parties may at all times cooperate in the implementation of Petroleum Operations, GNPC and Contractor shall not later than thirty (30) days after the Effective Date establish a Joint Management Committee (JMC). Without prejudice to the rights and obligations of Contractor for day-to-day management of the operations, the JMC shall oversee and supervise the Petroleum Operations and ensure that all approved Work Programmes and Development Plans are complied with and also that accounting for costs and expenses and the maintenance of records and reports concerning the Petroleum Operations are carried out in accordance with this Agreement and the accounting principles and procedures generally accepted in the international petroleum industry.

106. Article 7(1) sets out the obligations of the contractor under the Petroleum Agreement, i.e. the Claimants, including the following:

> 7.1 Subject to the provisions of this Agreement, Contractor shall be responsible for the conduct of Petroleum Operations and shall:
>
> a) conduct Petroleum Operations with utmost diligence, efficiency and economy in accordance with accepted industry practices, observing sound technical and engineering practices using appropriate advanced technology and effective equipment, machinery, materials and methods;
>
> b) take all practicable steps to ensure compliance with Section 3 of the Petroleum Law; including ensuring the recovery and prevention of waste of Petroleum in the Contract Area in accordance with accepted petroleum industry practices; […].

107. Article 10(1) sets out the principle of distribution of the gross production between the Parties as follows:

> 10.1 Gross Production of Crude Oil from each Development and Production Area shall […] be distributed amongst the Parties […].

108. Article 13(1) guarantees the contractor's rights with respect to the use of the currency proceeds obtained as a result of the sale of the petroleum:

> 13.1 Contractor shall for the purpose of this Agreement be entitled to receive, remit, keep and utilise freely abroad all the foreign currency obtained from the sales of the Petroleum assigned to it by this Agreement or purchased hereunder, or from transfers, as well as its own capital, receipts from loans and in general all assets thereby acquired abroad. Upon making adequate arrangements with regard to its commitment to conduct Petroleum Operations, Contractor shall be free to dispose of this foreign currency or assets as it deems fit.

109. Article 16 governs the duties of confidentiality and information concerning the operations under the Petroleum Agreement, in these terms:

> 16.1 Contractor shall keep GNPC regularly and fully informed of operations being carried out by Contractor and provide GNPC with all information, data, (film, paper and digital forms), samples, interpretations and reports, (including progress and completion reports) […];
>
> […]
>
> 16.4 All data, information and reports including interpretation and analysis supplied by Contractor pursuant to this Agreement shall be treated as confidential and shall not be disclosed by any Party to any other person without the express written consent of the other Parties.
>
> 16.5 The provisions of Article 16.4 shall not prevent disclosure:

a) **by GNPC or the State**:

i) to any agency of the State or to any adviser or consultant to GNPC or the State; […]

110. Article 17 sets out the contractor's obligations in the performance of the Petroleum Agreement, as follows:

> […]
>
> 17.2 Contractor shall take all necessary steps, in accordance with accepted petroleum industry practice, to perform activities pursuant to the Agreement in a safe manner and shall comply with all requirements of governing law, including all applicable labour, health and safety and environmental laws and regulations in force from time to time.
>
> […]
>
> 17.4 Contractor shall exercise its rights and carry out its responsibilities under this Contract in accordance with accepted petroleum industry practice, and shall take reasonable steps in such manner as to:
>
> a) result in minimum ecological damage or destruction;
>
> b) control the flow and prevent the escape or the avoidable waste of Petroleum discovered in or produced from the Contract Area;
>
> c) prevent damage to Petroleum-bearing strata;
>
> d) prevent the entrance of water through boreholes and wells to Petroleum-bearing strata, except for the purpose of secondary recovery;
>
> e) prevent damage to onshore lands and to trees, crops, buildings or other structures; and
>
> f) avoid any actions which would endanger the health or safety of persons.
>
> […]

111. Article 19(1), which provides the ownership regime that applies to the petroleum produced pursuant to the Petroleum Agreement, reads:

> 19.1 GNPC shall be the sole and unconditional owner of:
>
> a) Petroleum produced and recovered as a result of Petroleum Operations, except for such Petroleum as is distributed to the State and to Contractor pursuant to Article 10 or 14 hereof; […]
>
> […]

112. Lastly, Article 26 of the Petroleum Agreement refers to the laws and principles governing the relationship between the Parties thereunder, including a stabilisation mechanism, in the following terms:

> 26.1 This Agreement and the relationship between the State and GNPC on one hand and Contractor on the other shall be governed by and construed

in accordance with the laws of the Republic of Ghana consistent with such rules of intemational law as may be applicable, including rules and principles as have been applied by intemational tribunals.

26.2 The State, its departments and agencies, shall support this Agreement and shall take no action which prevents or impedes the due exercise and performance of rights and obligations of the Parties hereunder. As of the Effective Date of this Agreement and throughout its term, the State guarantees Contractor the stability of the terns and conditions of this Agreement as well as the fiscal and contractual framework hereof specifically including those terms and conditions and that framework that are based upon or subject to the provisions of the laws and regulations of Ghana (and any interpretations thereof) including, without limitation, the Petroleum Income Tax Law, the Petroleum Law, the GNPC Law and those other laws, regulations and decrees that are applicable hereto. This Agreement and the rights and obligations specified herein may not be modified, amended, altered or supplemented except upon the execution and delivery of a written agreement executed by the Parties. Any legislative or administrative act of the State or any of its agencies or subdivisions which purports to vary any such right or obligation shall, to the extent sought to be applied to this Agreement, constitute a breach of this Agreement by the State.

26.3 Where a Party considers that a significant change in the circumstances prevailing at the time the Agreement was entered into, has occurred affecting the economic balance of the Agreement, the Party affected hereby shall notify the other Parties in writing of the claimed change with a statement of how the claimed change has affected the relations between the Parties.

26.4 The other Parties shall indicate in writing their reaction to such notification referred to in Clause 26.3 within a period of three (3) months of receipt of such notification and if such significant changes are established by the Parties to have occurred, the Parties shall meet to engage in negotiations and shall effect such changes in, or rectification of, these provisions as they may agree are necessary.

[…].[33]

ii. The WCTP2 Petroleum Agreement

113. Article 2 of the WCTP2 Petroleum Agreement sets out its subject and provides for the contractor's obligation to carry out the petroleum operations in the following terms:

2.1 This Agreement provides for the Exploration for, and Development and Production of, Petroleum in the Contract Area by GNPC in association with Contractor.

2.1 Subject to the provisions of this Agreement, Contractor shall be responsible for the execution of such Petroleum Operations as are required by the provisions of this Agreement and, subject to Article 9, is hereby appointed the exclusive entity to conduct Petroleum Operations in the Contract Area. In order that the Parties may cooperate in the implementation

[33] Exh. C-1, Petroleum Agreement, 2 March 2006.

of Petroleum Operations, GNPC, and Contractor shall establish a Joint Management Committee to conduct and manage Petroleum Operations.

[…]

2.12 Notwithstanding Article 1.59, Springfield shall not later than three hundred and sixty-five (365) days after the Effective Date, or such other additional period as may be approved by the Minister, assign a material portion of its Participating Interest to an entity which shall be the technical partner and joint operator of the Contract Area. The technical partner shall be an entity with the requisite technical and financial capability to undertake Petroleum Operations selected by Springfield, acceptable to GNPC and approved by the Minister; provided however that GNPC's failure to accept such proposed technical partner shall not preclude Springfield from seeking approval from the Minister. The assignment of a Participating Interest to the technical partner shall not constitute a 'farmout' within the meaning of Article 25.5.

[…]

114. Article 3(1) contains the milestones applicable to the exploration period under the WCTP2 Petroleum Agreement. In relevant part, it reads:

3.1 The Exploration Period shall begin on the Effective Date and, subject to Article 22.8, shall not extend beyond five and one-half (5½) years unless otherwise extended by the Minister as provided for in accordance with the Petroleum Law.

(a) The Exploration Period shall be divided into an Initial Exploration Period of two and one-half (2½) years ("Initial Exploration Period") and two (2) extension periods, the first of one and one-half (1½) years and the second of one and one-half (1½) years each (respectively, "First Extension Period" and "Second Extension Period") and where applicable the further periods for which provision is made hereafter.

[…]

115. Likewise, Article 4(3) establishes the contractor's obligations in the performance of its exploration operations in the WCTP2 area, including as follows:

4.3 Subject to the provisions of this 3.5, in discharge of its obligations to carry out Exploration Operations in the Contract Area, Contractor shall, during the several phases into which the Exploration Period is divided, carry out the obligations specified hereinafter:

(a) **Existing Discoveries**

Contractor shall within a period of nine (9) months from the Effective Date undertake an evaluation of the Existing Discoveries, and shall submit an Appraisal Programme to the Petroleum Commission for approval and to the Minister for information purposes.

GNPC shall, as soon as practicable following the request of Contractor, make available to Contractor such records and information relating to the

> Contract Area as are relevant to undertake the evaluation and Appraisal in respect of the Existing Discoveries.
>
> (b) **Initial Exploration Period**: Commencing on the Effective Date and terminating two and one-half (2½) years from the Effective Date.
>
> **Description of Contractor's Minimum Work Obligation**:
>
> i) Geological and geophysical studies.
>
> ii) Drill one Exploration Well.
>
> **Minimum Expenditure**: The minimum expenditure for the work in the Initial Exploration Period shall be Thirty Million United States Dollars (US$30,000,000).
>
> […]

116. Lastly, Article 8.24 sets out the procedure applicable in case of new discoveries in the WCTP2 area and contemplates potential unitisation of fields in certain circumstances. In its relevant part, it reads:

> 8.24 In the event a field extends beyond the boundaries of the Contract Area, the Minister may require the Contractor to exploit said field in association with the third party holding the rights and obligations under a petroleum agreement covering the said field (or GNPC as the case may be). The exploitation in association with said third party or GNPC shall be pursuant to good unitisation and engineering principles and in accordance with International Best Oil Field Practice. In the event Contractor and said third party are unable to agree to the terms of unitisation, Contractor shall notify the Minister in writing and the Minister shall give appropriate directions to Contractor and the third party or GNPC to resolve the matter in accordance with International Best Oil Field Practice.[34]

c. Implementation of the petroleum agreements

i. The OCTP Petroleum Agreement

117. The exploration and appraisal of the OCTP contract area pursuant to the Petroleum Agreement took place between 2009 and 2013.[35] During this period, Eni, as operator under the Petroleum Agreement, drilled a total of eight wells (Sankofa-1, Sankofa-2A, Sankofa-2STA, Gye Nyame-1, Gye Nyame-2A, Sankofa East-1X, Sankofa East-2A and Sankofa East-3A). These exploration activities led to the discovery in OCTP of three NAG fields (Sankofa Main, Sankofa East and Gye Nyame) and two oil fields (Sankofa East Cenomanian and Sankofa East-2A Campanian).[36]

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34 Exh. C-8, WCTP2 Petroleum Agreement, 26 July 2016.

35 Exh. C-2, OCTP Integrated Plan of Development, Phase-1 (Oil), December 2014, p. 16.

36 Exh. C-2, OCTP Integrated Plan of Development, Phase-1 (Oil), December 2014, p. 16.

118. Following the exploration and appraisal phase, the implementation of the OCTP Project contemplated an integrated development of the OCTP area, consisting of two phases: a first phase involving crude oil and a second phase involving NAG and condensate.[37]

119. According to this integrated development plan, during the first phase, the crude oil and associated gas produced in OCTP would be treated by the FPSO unit. The FPSO would then deliver the processed oil to tankers for sale on the international market and re-inject the treated associated gas together with water in the reservoirs to maintain the pressure levels and to improve hydrocarbon recovery.[38] Part of the associated gas would also be used as fuel to generate power for the FPSO.[39]

120. The second phase concerned the exploitation of the three NAG pools (Sankofa Main, Sankofa East and Gye Nyame). The NAG produced from such pools would be sent to the FPSO unit for pre-treatment and later transported to onshore facilities for GNPC to use in the Ghanaian market.[40]

121. The Claimants and GNPC included such integrated plan for the implementation of the OCPT Project in a plan of development (the "PoD") submitted to the MoE on 17 December 2014 and approved on 8 June 2015.[41] They later amended the PoD on 12 April 2016, 12 September 2018, 22 October 2018 and April 2019.[42]

122. Particularly concerning the two oil fields (Sankofa East Cenomanian and Sankofa East-2A Campanian), according to the relevant PoD, as a result of the drilling of the Sankofa East-1X well between June and August 2012, Eni discovered an oil bearing reservoir, the Sankofa East Cenomanian oil field (the "Sankofa Cenomanian Field"). Later, between November 2012 and January 2013, drilling activities in the Sankofa East-2A well carried out for the appraisal of the Sankofa East-1X identified an "Oil-Water-

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37 Notice of Arbitration, ¶ 18; SoD, ¶ 36, referring to Exh. R-8, OCTP Integrated PoD, Economics Chapter, December 2014, p. 6.

38 Exh. C-2, OCTP Integrated Plan of Development, Phase-1 (Oil), December 2014, pp. 12, 14-15.

39 Exh. C-2, OCTP Integrated Plan of Development, Phase-1 (Oil), December 2014, p. 15.

40 Exh. C-2, OCTP Integrated Plan of Development, Phase-1 (Oil), December 2014, pp. 12, 14-15.

41 Exh. C-2, OCTP Integrated Plan of Development, Phase-1 (Oil), December 2014; Exh. C-3, OCTP Integrated Plan of Development Phase-2 (Non-Associated Gas), December 2014.

42 Exh. C-4, Amendment to Phase-1 (Oil) of the OCTP Integrated PoD, April 2016; Exh. C-5, Amendment to OCTP Integrated PoD, March 2018; Exh. C-6, Amendment to the OCTP Integrated PoD (SNKE-2A Well), October 2018; Exh. C-7, Amendment to the OCTP Integrated PoD (Oil Production and Gas Injection Optimization), April 2019.

Contact" ("OWC"), which served as the delimitation for the Sankofa Cenomanian Field in the PoD.[43] Additionally, through the Sankofa East-2A well, Eni, as operator under the Petroleum Agreement, discovered the second oil field, Sankofa East-2A Campanian.[44]

123. According to the Claimants, their investments in the OCPT Project currently amount to approximately USD 6.05 billion, out of which over USD 3.7 billion relate to the Sanoka Cenomanian Field.[45] The Respondents seemingly do not dispute that the Claimants have incurred such costs, but emphasize that the applicable fiscal regime in Ghana "includes a cost recovery mechanism that allows contractors to obtain reimbursement for 100% of the expenditures incurred to explore, appraise, develop, and produce petroleum […] upon the discovery of hydrocarbons".[46]

ii. The WCTP2 Petroleum Agreement

124. The WCTP2 Petroleum Agreement in its Article 4.3(b) contemplates an initial exploration period of two and a half years beginning from the date on which it became effective, i.e. 26 July 2016.[47] On 25 November 2016, the Ghanaian Petroleum Commission (the "Petroleum Commission") extended such exploration period for an additional year and a half, taking it to a total of four years.[48]

125. Likewise, the initial period for the appraisal of the WCTP2 Existing Discoveries was originally nine months by virtue of Article 4.3(a) of the WCTP2 Petroleum Agreement, but was later extended by two years.[49]

126. By the time Springfield launched the unitisation process, which will be described in the following section, the WCTP2 was still in the exploration phase.

B. UNITISATION

127. At the heart of this dispute is the process known as "unitisation". While the Parties dispute the precise contents and requirements of this process, in essence it refers to a

43 Exh. C-2, OCTP Integrated Plan of Development, Phase-1 (Oil), December 2014, p. 23.

44 Exh. C-2, OCTP Integrated Plan of Development, Phase-1 (Oil), December 2014, p. 23.

45 NoA, ¶¶ 21, 25; SoC, ¶ 222.

46 SoD, ¶¶ 29, 33.

47 Exh. C-8, WCTP2 Petroleum Agreement, 26 July 2016, Article 4.3(b).

48 Exh. C-9, Letter from the Ghanaian Petroleum Commission to Springfield, 25 November 2016.

49 Exh. C-9, Letter from the Ghanaian Petroleum Commission to Springfield, 25 November 2016.

regulatory decision pursuant to which two or more adjacent oil and/or gas fields operated by different operators are unified under a single concession, with the resulting rearrangement of the terms of the respective underlying concessions. In this section, the Tribunal sets out the legal framework applicable to unitisation in Ghana and describes the unitisation process that took place between OCTP and WCTP2.

1. Legal framework

128. By virtue of Ghanaian law, two main provisions govern the implementation of unitisation.[50]

129. First, Section 34 (Co-ordination of petroleum activities and unitisation) of the Petroleum (Exploration and Production) Act, 2016 (the "Petroleum Act") provides the principles for the operation of unitisation by virtue of Ghanaian law.

130. Particularly, Section 34(1) sets out the scenario under which unitisation may proceed and its main goal of achieving optimum petroleum recovery. It reads as follows:

> (1) Where an accumulation of petroleum extends beyond the boundaries of one contract area into one or more other contract areas, the Minister in consultation with the Commission may, for the purpose of ensuring optimum recovery of petroleum from the accumulation of petroleum, direct the relevant contractors, to enter into an agreement to develop and produce the accumulation of petroleum as a single unit.

131. The procedure to enter into the agreement referred in Section 34(1) is described in Section 34(2), which states that such agreement "shall be entered into within a period specified by the Minister and shall be submitted to the Minister for approval".

132. For its part, Section 34(3) further specifies the terms for the coordination of operations in cases where petroleum accumulations are found in different areas, as follows:

> (3) Where two or more accumulations of petroleum are in proximity to one another but are
>
> *(a)* in different contract areas, or
>
> *(b)* in one contract area and an area not covered by a petroleum agreement,
>
> the Minister may require the accumulations of petroleum to be developed and produced in a coordinated manner in order to ensure efficient petroleum activities.

[50] NoA, ¶¶ 45, 117; SoD, s. II.D.2.

133. Section 34(5) establishes the requirement of Parliamentary ratification of the unitisation in certain circumstances as mentioned therein:

> (5) The Minister may stipulate conditions and make appropriate directions to the Corporation and the contractor as prescribed for the unitised development and such condition, if significantly different from the conditions of the adjoining contract area, shall be ratified by Parliament.[51]

134. Section 34 of the Petroleum Act as a whole is to be read in light of the principles set out in Section 4, pursuant to which "[t]he management of petroleum resources by the Republic of Ghana shall be conducted in accordance with the principles of good governance, including transparency and accountability and the object of this Act". In turn, Section 2 of the Petroleum Act, defines as the object of the Act to "ensure safe, secure, sustainable and efficient petroleum activities in order to achieve optimal long-term petroleum resource exploitation and utilisation for the benefit and welfare of the people of Ghana."

135. Second, Regulation 50 (Co-ordination of petroleum activities and unitisation) of Ghana's Petroleum (Exploration and Production) (General) Regulations, 2018 (the "Petroleum Regulations") aims to give effect to Section 34 of the Petroleum Act.

136. Subsections (1), (2) and (3) of Regulation 50 specify the content of the unitisation and coordination agreement referred in Section 34(1), including, respectively, that such agreement: (i) "shall be governed and construed by the laws of the Republic"; (ii) "shall be entered into in accordance with a model agreement provided by the Minister"; and (iii) "shall be submitted to the Minister for approval".

137. Subsections (4) and (5) in turn provide the time limits for: (i) the relevant contractors to submit to the MoE a draft unitisation and unit operating agreement or an agreement to coordinate and develop separate petroleum accumulations; and (ii) the MoE to approve such agreements, in the following terms:

> (4) The relevant contractors shall submit to the Minister a draft unitisation and unit operating agreement or an agreement to coordinate and develop separate petroleum accumulations based on the model agreement described in subregulation (1) within six months after the finalisation of appraisal of the petroleum accumulation.
>
> (5) The Minister may approve the agreement referred to in subregulation (4) at the same time as the time for approval of the initial development plan for the area or at any other time as determined by the Minister.

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[51] Exh. C-16, Petroleum Act, 2016, Section 34.

138. Subsection (6) contemplates the case in which the contractors do not submit any such agreement, allowing the MoE to then set out the terms and conditions for the relevant unitisation or coordination as follows:

> (6) Where the relevant contractors do not submit a unitisation or a coordination agreement pursuant to subregulation (5), the Minister may stipulate the terms and conditions for the unitisation or coordination of petroleum resources in the area and may seek the opinion of an independent third-party expert at the cost of the contractors.[52]

139. Prior to the entry into force of the Petroleum Act and at the time of conclusion of the Petroleum Agreement, the former Petroleum (Exploration and Production) Act 1984 governed unitisation under Ghanaian law.[53] Section 4(7) of such law granted discretion to the MoE to determine whether unitisation of two petroleum fields was appropriate in a given case, as follows:

> Where a petroleum field extends beyond the boundaries of an area covered by a petroleum agreement or other authority granted or recognised under this Act, the Minister may determine that the petroleum field shall be developed as a single unit and may give appropriate direction to the Corporation or the contractor or any other person concerned.[54]

140. The Constitution of the Republic of Ghana (the "Constitution") contains further guidance for the interpretation of these provisions. In particular, Article 23 thereto sets out limits for the acts of administrative bodies and officials as follows:

> Administrative bodies and administrative officials shall act fairly and reasonably and comply with the requirements imposed on them by law and persons aggrieved by the exercise of such acts and decisions shall have the right to seek redress before a court or other tribunal.

141. Article 296 of the Constitution also circumscribes the discretionary powers vested in governmental authorities, by stating that:

> Where in this Constitution or in any other law discretionary power is vested in any person or authority –
>
> a. that discretionary power shall be deemed to imply a duty to be fair and candid;

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52 Exh. C-66, Petroleum Regulations, 2018, Regulation 50.

53 Exh. RLA-16, Petroleum (Exploration and Production) Act 1984.

54 Exh. RLA-16, Petroleum (Exploration and Production) Act 1984, Section 4(7).

> b. the exercise of the discretionary power shall not be arbitrary, capricious or biased either by resentment, prejudice or personal dislike and shall be in accordance with due process of law; [...]

142. Further, while the Petroleum Agreement does not contain any provisions concerning unitisation, Article 8 (Commerciality) of the WCTP2 Petroleum Agreement sets out the procedure to be followed in case of discoveries, applying both to the WCTP2 Existing Discoveries, unless the agreement indicates otherwise, and to new discoveries. Relevantly, Article 8.24 also cited above refers to the scenario where "a field extends beyond the boundaries of the Contract Area", in which case the MoE "may require the Contractor to exploit said field in association with the third party holding the rights and obligations under a petroleum agreement covering the said field […] pursuant to good unitisation and engineering principles and in accordance with International Best Oil Field Practice. […]".[55]

143. Finally, the Parties refer to the "international best practices" concerning unitisation, as summarized by the Petroleum Commission. The Petroleum Commission states that a number of preconditions must be satisfied in order for unitisation to be warranted in a specific case: (i) the available evidence must suggest that a geological structure with petroleum bearing potential straddles a concession boundary; (ii) the parties have to analyse the distribution of petroleum "to establish if the structure is a common reservoir"; (iii) the parties then have to share the collected data in order to "consider the potential for the presence of a common structure that might merit unitisation"; and (iv) if there exists such a common structure warranting unitisation, the parties may voluntarily unitise the reservoirs or be compelled to do so.[56]

144. While the Parties do not dispute the content of the Petroleum Commission's statement, they disagree on its interpretation. According to the Claimants, international oilfield practice that informs the Petroleum Commission's preconditions requires an appraisal of the relevant discovery showing, *inter alia*, pressure or dynamic communication across the boundary of the contract area, as well as commerciality of a project.[57] By contrast, the Respondents submit that neither dynamic communication nor

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55 Exh. C-8, WCTP2 Petroleum Agreement, 26 July 2016, Article 8.24.

56 Exh. C-20, Letter from the Petroleum Commission to the MoE, 2 April 2020, p. 4.

57 SoC, ¶¶ 186, 193, 195.

commerciality are prerequisites for unitisation under international practice and a straddling accumulation is sufficient.[58]

2. Development of the unitisation process between OCTP and WCTP2

a. Springfield's unitisation requests

145. On 20 March 2018, Springfield delivered to Ghana's Minister of Energy a "Unitisation Request in Respect of the Sankofa East Oil Field and Sankofa Main Gas Field" (the "First Unitisation Request").[59] Through the First Unitisation Request, Springfield demanded the unitisation of the Sankofa Field across the WCTP2 boundary, based on presumed evidence that the hydrocarbon accumulation in the Sankofa Field, located in the OCTP area, extended into the WCTP2 area.[60] The First Unitisation Request invoked Articles 34(1) and (2) of the Petroleum Act as the legal basis for the request.[61]

146. On 17 April 2018, the MoE, having examined the First Unitisation Request, invited Springfield to present its case for unitisation of the relevant areas to a technical team at the MoE.[62]

147. On 17 May 2018, Springfield made a presentation to the MoE, attended also by GNPC, concerning its position on the unitisation of the Sankofa Field and parts of the WCTP2 block. As a result of this meeting, on 5 June 2018 GNPC submitted to the MoE its "Independent Investigation of Hydrocarbon Prone Cenomanian Turbidite Channel that Possibly Straddles WCTP Block2 and OCTP/CTP Block 4" dated 1 June 2018 (the "2018 GNPC Report").[63] According to the conclusions of the 2018 GNPC Report, "[s]eismic amplitude expression of a cenomanian turbidite channel fairway straddles the boundary between OCTP Block 4 and WCTP Block".[64]

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58 SoD, ss. II.D.3(b) and (c).

59 Exh. R-20, Letter from Springfield to the MoE, 20 March 2018.

60 Exh. R-20, Letter from Springfield to the MoE, 20 March 2018, p. 1.

61 Exh. R-20, Letter from Springfield to the MoE, 20 March 2018, p. 2.

62 Exh. R-21, Letter from the MoE to Springfield, 17 April 2018.

63 Exh. R-22, Letter from GNPC to the MoE, 5 June 2018.

64 Exh. R-22, Letter from GNPC to the MoE, 5 June 2018, p. 15 of the PDF.

148. On 19 July 2018, the MoE invited Eni to indicate its position concerning the First Unitisation Request.[65] On 6 August 2018, Eni replied that there was no evidence that the Sankofa Field extended to the WCTP2 block operated by Springfield.[66]

149. On 14 August 2018, lacking any confirmation from the MoE concerning its First Unitisation Request, Springfield submitted to the MoE a second request for the unitisation of the relevant areas (the "Second Unitisation Request"), asking the MoE to direct Eni and itself to enter into an agreement for such purpose.[67] The MoE did not grant the Second Unitisation Request. While it did not outright deny the Second Unitisation Request at any point, it advised Springfield "to drill their side of the reservoir to confirm the seismic data interpretations" reached by the 2018 GNPC Report.[68] According to the MoE, such drilling was necessary to confirm the purported existence of a petroleum accumulation straddling the OCTP and WCTP2 blocks and thus "to ensure that there was ample evidence to justify unitisation".[69]

150. In October 2019, following the MoE's advice, Springfield started drilling works in an exploration well in the WCTP2 area adjacent to the OCTP area, the Afina-1X Well. These works resulted in the discovery of petroleum accumulation in the area (the "Afina Discovery"), confirmed by Springfield in a Notice of Discovery released on 13 November 2019.[70] According to the Respondents, the discovery "confirmed the presence of hydrocarbons in WCTP-2".[71] Conversely, the Claimants maintain that "Springfield did not perform robust testing of the Afina Discovery […] or an appraisal" in order to ascertain the Afina Discovery's commerciality and potential for development, as well as the appropriateness of the unitisation request.[72]

151. On 27 January 2020, Springfield submitted a third request asking for the MoE to order Springfield and Eni to undertake discussions for the unitisation of the OCTP and

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65 Exh. C-81, Letter from the MoE to Eni, 19 July 2018.

66 Exh. C-82, Letter from Eni to the MoE, 6 August 2018.

67 Exh. R-23, Letter from Springfield to the MoE, 14 August 2018.

68 Exh. C-11, Letter from the MoE to Eni and Springfield (April Directive), 9 April 2020, p. 2; SoD, ¶ 103.

69 Exh. C-11, Letter from the MoE to Eni and Springfield (April Directive), 9 April 2020, p. 2.

70 Exh. C-12, Notice of the Afina Discovery, 13 November 2019.

71 SoD, ¶ 108.

72 NoA, ¶ 41.

WCTP2 contract areas (the "Third Unitisation Request").[73] With the Third Unitisation Request, Springfield attached a technical report dated January 2020, which it had authored (the "2020 Springfield Report"). Pursuant to the 2020 Springfield Report, Springfield examined pre- and post-drill evidence of the Afina Discovery and pointed to the "irrefutable conclusion" that the Sankofa Field "extends beyond the OCTP boundary into the WCTP 2 Contract Area" and that "the Cenomanian reservoir fair way straddles OCTP and WCTP 2 Contract Areas and is thus an obvious candidate for unitisation".[74]

152. On 20 February 2020, the MoE requested the Petroleum Commission to review the 2020 Springfield Report in order to confirm its findings that the Sankofa Field straddled OCTP and WCTP2 and that the two reservoirs were indeed "in pressure communication".[75] The Petroleum Commission invited both Eni and Springfield to state their position on the matter.[76]

153. On 11 March 2020, Springfield delivered a presentation[77] and held technical discussions with the Petroleum Commission concerning its unitisation request and the conclusions of its 2020 Springfield Report.[78]

154. On 26 March 2020, Eni submitted a letter in which it expressed its view that Springfield's unitisation request was premature, since Springfield had still not carried out the appraisal of the Afina Discovery and was still to prove the grounds for commencing unitisation discussions.[79] The Petroleum Commission's letter to the MoE indicates that Eni did not submit any technical documentation in support of its position.[80]

155. On 2 April 2020, the Petroleum Commission concluded in a note that it was "likely that the Sankofa Cenomanian reservoir straddles WCTP2 and OCTP" (the "2020 Petroleum Commission Note"). It further recommended that the MoE direct Springfield and Eni "to hold pre-unitisation discussions" and to "exchange data to establish the evidence that a geological structure with petroleum bearing potential straddles the boundary

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73 Exh. C-17, Letter from Springfield to the MoE, 27 January 2020.

74 Exh. C-90, Springfield's Brief Technical Report on the Extension of Sankofa Cenomanian Reservoir into West Cape Three Points Block 2, January 2020, p. 7.

75 Exh. C-20, Letter from the Petroleum Commission to the MoE, 2 April 2020, p. 1.

76 Exh. C-20, Letter from the Petroleum Commission to the MoE, 2 April 2020, p. 1.

77 Exh. C-175, Presentations by Springfield, 11 March 2020.

78 Exh. C-20, Letter from the Petroleum Commission to the MoE, 2 April 2020, p. 3.

79 Exh. C-20, Letter from the Petroleum Commission to the MoE, 2 April 2020, p. 3.

80 Exh. C-20, Letter from the Petroleum Commission to the MoE, 2 April 2020, p. 5.

separating the WCTP2 Block and the OCTP Block".[81] In accordance with the Petroleum Commission's recommendation, the parties were to "consider the potential for the presence of a common structure that might merit unitisation".[82]

b. Launch of unitisation by the April Directive

156. On 9 April 2020, based on the 2020 Petroleum Commission Note and on the 2018 GNPC Report, the MoE directed Springfield and Eni to begin the process for "the unitisation or otherwise of the Afina and Sankofa fields" within 30 days, and to provide the MoE a draft unitisation and unit operating agreement (the "Draft UUOA") within 120 days (the "April Directive").[83] In the April Directive, the MoE invoked Section 34 of the Petroleum Act and Regulation 50(6) of the Petroleum Regulations.

157. On 29 April 2020, Springfield contacted Eni to prompt the process for conclusion of the Draft UUOA.[84] In its letter, Springfield mentioned that the timelines set out in the April Directive were "very achievable" and "in the best interest of the contractors and the nation".[85]

158. On the same date, i.e. on 29 April 2020, Springfield also informed the MoE that it intended to fully comply with the April Directive and that it would undertake exchanges with Eni to this end.[86]

159. On 7 May 2020, Springfield again contacted Eni in order to request the exchange of data in line with the content of the April Directive.[87]

160. On 11 May 2020, Eni informed the MoE that it was arranging a meeting with Springfield to assess the available information and "to evaluate whether such data demonstrate hydrocarbon communication between Afina 1x and Sankofa field or otherwise".[88] To that effect, it requested copies of the 2018 GNPC Report and the 2020 Petroleum Commission Note from the NoE. It further stated its view that the existence of

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81 Exh. C-20, Letter from the Petroleum Commission to the MoE, 2 April 2020, p. 5.

82 Exh. C-20, Letter from the Petroleum Commission to the MoE, 2 April 2020, p. 6.

83 Exh. C-11, Letter from the MoE to Eni and Springfield (April Directive), 9 April 2020.

84 Exh. C-113, Letter from Springfield to Eni, 29 April 2020.

85 Exh. C-113, Letter from Springfield to Eni, 29 April 2020, p. 1.

86 Exh. R-28, Letter from Springfield to the MoE, 29 April 2020.

87 Exh. C-95, Letter from Springfield to Eni, 7 May 2020.

88 Exh. C-18, Letter from Eni to the MoE, 11 May 2020.

hydrocarbon communication between the Afina Discovery and the Sankofa Field had not been established and could not be evaluated in the absence of relevant data for the Afina Discovery.

161. On 12 May 2020, a meeting took place between Springfield, Eni, GNPC and GNPC Exploration. At the meeting, the participants agreed to work on the Draft UUOA in accordance with the April Directive.[89] They also agreed to meet again on 15 May 2020 in order to continue discussing the Draft UUOA.[90] However, the 15 May 2020 meeting did not take place.[91]

162. On 18 May 2020, the MoE replied to Eni's request for copies of the 2018 GNPC Report and the 2020 Petroleum Commission Note, advising that these were confidential documents, which could not be shared with Eni.[92]

163. Also on 18 May 2020, Eni delivered a letter to Springfield stating its position that the hydrocarbon communication between the Afina Discovery and the Sankofa Field had not been established. Therefore, it agreed to exchange raw data "on a like-for-like basis" only "for the exclusive purpose of evaluating whether such data proves hydrocarbon communication between the Afina discovery and Sankofa field".[93]

164. On 20 May 2020, Springfield replied to Eni indicating that, by virtue of Section 34(1) of the Petroleum Act, it was not required to establish hydrocarbon communication in order to proceed with unitisation. The only requirement under such regime was the existence of an accumulation of petroleum extending beyond the boundaries of a contract area.[94] It further urged Eni to share the data "to establish the structural extent and distribution of petroleum between the two contract areas", as purportedly required for compliance with the April Directive, and not data to prove such hydrocarbon communication.[95] This data was described by Springfield as "data for a green field/brown field unitisation".[96]

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89 Exh. R-29, Email from Springfield to Eni, 12 May 2020, p. 1 of the PDF; Exh. C-96, Email from Eni to Springfield, 13 May 2020, pp. 3-4 of the PDF.

90 Exh. R-30, Email from Springfield to Eni, 12 May 2020.

91 Exh. C-96, Email from Springfield to Eni, 15 May 2020, p. 1 of the PDF.

92 Exh. C-19, Letter from the MoE to Eni, 18 May 2020.

93 Exh. R-31, Letter from Eni to Springfield, 18 May 2020.

94 Exh. C-127, Letter from Springfield to Eni, 20 May 2020, ¶ 1.

95 Exh. C-127, Letter from Springfield to Eni, 20 May 2020, ¶ 2.

96 Exh. C-127, Letter from Springfield to Eni, 20 May 2020, ¶ 3.

165. On 2 June 2020, Eni sent a letter to the MoE stating that the establishment of hydrocarbon communication was necessary to determine the existence of an accumulation of petroleum beyond the boundaries of the OCTP area. It therefore stated that Springfield and Eni should first exchange raw data to evaluate the existence of such communication.[97]

166. On 5 June 2020, Eni reiterated to Springfield that the available data did not establish the existence of accumulation of petroleum extending beyond the boundaries of OCTP. It referred to the Draft Exchange Agreement shared with Springfield for the "sharing of raw data on a like-for-like basis", as the confidentiality agreement prepared by Springfield was, according to Eni, not suitable for the required information exchange.[98] Eni also further stated that the timetable should take into account the findings of this data exchange between the parties.[99]

167. On 10 June 2020, Springfield informed the MoE that Eni was refusing to cooperate with Springfield for the implementation of the April Directive. Particularly, Springfield indicated that Eni had refused to agree on the terms of a potential confidentiality agreement with Springfield to exchange relevant data for launching the unitisation process and on a tentative schedule for the purpose of fulfilling the April Directive. It further asserted that Eni kept insisting on sharing data on a "like for like" basis, which was not possible since the "Afina and Sankofa fields are in different stages of the petroleum cycle with the Sankofa field already in production".[100]

168. On 22 June 2020, Eni wrote to the MoE expressing its concerns regarding the April Directive and stating that it was premature to conclude that unitisation was appropriate.[101] Invoking Section 34(1) of the Petroleum Act, Eni submitted that a comprehensive assessment of the petroleum accumulation was needed to ensure the optimum recovery of petroleum pursuant to any potential unitisation. This required a finalized appraisal of the Afina Discovery and the exchange of raw data mentioned by Eni, for which it proposed a draft data exchange agreement.[102]

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97 Exh. C-97, Letter from Eni to the MoE, 2 June 2020.

98 Exh. R-32, Letter from Eni to Springfield, 5 June 2020, p. 1 of the PDF.

99 Exh. R-32, Letter from Eni to Springfield, 5 June 2020, p. 2 of the PDF.

100 Exh. C-98, Letter from Springfield to the MoE, 10 June 2020, p. 2.

101 Exh. C-99, Letter from Eni to the MoE, 22 June 2020.

102 Exh. C-99, Letter from Eni to the MoE, 22 June 2020, pp. 2-3.

169. On 26 June 2020, Eni replied to Springfield's letter of 10 June and stated that it objected to the criticism of its conduct and was "extremely disappointed in [Springfield's] inflammatory tone".[103] It also urged Springfield to reconsider its position concerning the draft data exchange agreement.

170. On 7 July 2020, Springfield sent a response to Eni in which it purported to address Eni's concerns regarding the exchange of data between the parties and the confidentiality agreements to that effect. Once more, Springfield clarified that any potential data to be exchanged would not be on a like for like basis, "simply because of asymmetry of available information or data" given the different stages of development of the Afina Discovery and the Sankofa Field.[104] Springfield also expressed its intention to give effect to the April Directive.[105]

171. On 10 July 2020, as further described below, Springfield brought an action against the Claimants before Ghanaian courts seeking to obtain compliance with the April Directive.[106]

172. On 21 July 2020, Eni wrote to the MoE indicating that, in an effort to move discussions forward, it was willing to enter into an alternative draft agreement for the exchange of data which it alleged was based on Springfield's "preferred form of agreement".[107] This would allow the parties to properly evaluate "the nature of the reservoirs and the existence of hydrocarbon communication", thus deciding on the appropriate steps to be followed.[108]

173. On 22 and 23 July 2020, while Eni and Springfield exchanged emails in relation to the adjusted draft agreement for data exchange, Eni informed Springfield on 23 July that it had been notified of the lawsuit brought before the Ghanaian courts and, as a result, it was "unable to continue discussions until further notice".[109]

174. On 27 July 2020, the MoE advised Springfield and Eni that the process had not advanced as expected due to the lack of cooperation between the parties in respect of

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103 Exh. R-39, Letter from Eni to Springfield, 26 June 2020.

104 Exh. R-40, Letter from Springfield to Eni, 7 July 2020.

105 Exh. R-40, Letter from Springfield to Eni, 7 July 2020, p. 2.

106 Exh. C-22, Writ of Summons issued by Springfield, 10 July 2020.

107 Exh. C-100, Letter from Eni to the MoE, 21 July 2020, p. 3.

108 Exh. C-100, Letter from Eni to the MoE, 21 July 2020, p. 3.

109 Exh. C-103, Emails between Springfield and Eni, 22 and 23 July 2020.

the exchange of data. Since the timelines set out in the April Directive could no longer be met, the MoE decided to suspend the directive while the ongoing discussions between the parties continued. The MoE also invited the Parties for a meeting on 3 August 2020 to pursue further discussions.[110]

175. On 30 July 2020, Eni informed the MoE that Springfield had issued a Writ of Summons against the Claimants in the Commercial Division of the High Court in Accra, as well as a Motion on Notice for the Preservation of Funds.[111]

176. Following the postponement of the 3 August 2020 meeting, Eni and Springfield met with the MoE on 19 August 2020. On the same date, the MoE sent a letter to Eni and Springfield, summarizing steps and timelines that it understood to have been agreed at the meeting. The Claimants disagreed with these timelines, as is clear from its letters of 26 and 28 August 2020 described below. In particular, the summary provided the next steps for the assessment of the proposed unitisation, including: (i) within one week, the execution of a confidentiality agreement, (ii) within two weeks, each party's completion of an independent analysis to determine "the extent of straddling of the accumulation and the Tract Participation of the two Blocks" and (iii) within one month, the submission of a joint report to the MoE indicating each party's interest concerning the unitisation process. The MoE also indicated that it had engaged an independent party to carry out a similar exercise and to issue a report which, pursuant to Regulation 50(6) of the Petroleum Regulations, would be the basis of the MoE's final decision if the parties did not comply with the April Directive.[112]

177. On 26 August 2020, Eni informed the MoE that it was available to execute the relevant confidentiality undertakings in order to exchange data required for evaluating "whether the accumulations straddle the boundary between our respective contract areas".[113] However, it indicated that any constructive discussions had been hindered by Springfield's initiation of legal proceedings against Eni, and that such discussions could only resume once the proceedings were withdrawn. Eni further asserted that the proposed timeline for the technical evaluation was too short and should be extended. It also underscored that the involvement of an independent third party was not

110 Exh. C-27, Letter from the MoE to Eni and Springfield, 27 July 2020.

111 Exh. C-104, Letter from Eni to the MoE, 30 July 2020.

112 Exh. C-28, Letter from the MoE to Eni and Springfield, 19 August 2020.

113 Exh. C-106, Letter from Eni to the MoE, 26 August 2020.

necessary at this stage, but may be warranted later on, "only in the event of a misalignment between Eni Ghana and Springfield on the evaluation results".[114]

178. On 28 August 2020, Eni requested the MoE to extend the referred timelines to allow the parties to constructively collaborate on the process and to proceed with the relevant data exchange.[115]

179. On 4 September 2020, the MoE replied to Eni that, while it considered the referred timeline as adequate, "additional time would be given to complete the exercise when it becomes necessary".[116] The MoE did not specify the terms for any potential extension of the timelines, and would not address such extension further until its letter of 15 October 2020 referred below. The MoE also indicated that it "would engage Springfield regarding the legal proceedings initiated […] against Eni Ghana and Vitol […]".[117]

180. On 8 September 2020, Springfield wrote to the MoE stating that Eni had not engaged with Springfield at any point in order to comply with the April Directive. In such circumstances, Springfield requested, by virtue of Regulation 50(6) of the Petroleum Regulations, that the MoE impose the findings of the 2018 GNPC Report and of the report of the independent third party "as terms and conditions for the unitisation of the Afina and Sankofa fields".[118]

181. On 11 September 2020, Eni reiterated to the MoE that it would commence the necessary work once Springfield withdrew the legal proceedings initiated against the Claimants in Ghanaian courts.[119]

c. Imposition of unitisation by October and November Directives

182. On 29 September 2020, the MoE contacted GNPC, directing it to update its analysis carried out in the 2018 GNPC Report on the basis of the newly obtained evidence on the Afina Discovery. It thus requested GNPC to advise the MoE "whether hydrocarbon

114 Exh. C-106, Letter from Eni to the MoE, 26 August 2020, p. 2.

115 Exh. C-29, Letter from Eni to the MoE, 28 August 2020.

116 Exh. C-30, Letter from the MoE to Eni, 4 September 2020.

117 Exh. C-30, Letter from the MoE to Eni, 4 September 2020.

118 Exh. R-44, Letter from Springfield to the MoE, 8 September 2020.

119 Exh. C-108, Letter from Eni to the MoE, 11 September 2020.

accumulation straddles the two blocks (WCTPB2 and OCTP)".[120] The MoE did not include the Claimants and Springfield in its communication.

183. On 6 October 2020, Eni sent a further letter to the MoE informing it that Springfield had still not withdrawn the legal proceedings initiated against it, and requesting an extension to the timeline set by the MoE in correspondence following up the 19 August 2020 meeting.[121]

184. Also on 6 October 2020, GNPC issued its "Independent Technical Evaluation of the Cenomanian Channel and Hydrocarbon Accumulation across the WCTP Block 2 and OCTP Block" (the "2020 GNPC Report"). According to the conclusions of the 2020 GNPC Report, there was connectivity and static communication between the Sankofa Field and the Afina Discovery, with the result that "the same channel complex straddles both blocks".[122]

185. On 14 October 2020, the MoE delivered a letter to Eni and Springfield (the "October Directive") in which it observed that the parties had not submitted a joint report as agreed in the 19 August 2020 meeting, and that their actions demonstrated that they did not intend to comply with the MoE's directives. Consequently, the MoE had engaged GNPC to update its 2018 GNPC Report, resulting in the 2020 GNPC Report which confirmed that the hydrocarbon accumulation straddled the two blocks.

186. Relying on Regulation 50(6) of the Petroleum Regulations, the MoE imposed the terms and conditions for the unitisation of the Afina Discovery and the Sankofa Field with immediate effect. Such terms and conditions as set out in the October Directive included the following:

> (i) the MoE declared the unitisation of the rights and interests of the parties to the Petroleum Agreement and the WCTP2 Petroleum;
>
> (ii) based on the 2020 GNPC Report, the initial tract participation in the unitised Afina field and the Sankofa field, i.e. the participation of each of the parties involved, was to be 54.545% for the WCTP2 parties and 45.455% for the OCTP parties;

120 Exh. R-47, Letter from the MoE to GNPC, 29 September 2020.

121 Exh. C-110, Letter from Eni to the MoE, 6 October 2020.

122 Exh. C-32, 2020 GNPC Report, 6 October 2020, p. 27.

(iii) all produced petroleum, as well as all expenditures, were to be allocated between the parties in accordance with their tract participation, with retroactive effect;

(iv) Eni was designated as operator of the area; and

(v) the parties were to undertake a redetermination exercise within 18 months.[123]

187. On 15 October 2020, the MoE replied to Eni's letter of 6 October granting an extension of two weeks to the timeline that had been set out as a result of the 19 August meeting with the parties.[124]

188. On 28 October 2020, the Claimants delivered a letter to the MoE expressing their concerns regarding the October Directive and asserting that the relevant procedure for the establishment of the unitisation regime had not been followed. In particular, the Claimants underscored that the appraisal of the Afina Discovery was still pending and that they had not received any data showing that the two relevant areas were indeed ripe for unitisation. According to the Claimants, a comprehensive assessment of the petroleum accumulation was necessary to warrant unitisation, and could not be carried out without appraising the Afina Discovery.[125] Therefore, the Claimants urged the MoE to withdraw the October Directive and to work towards the withdrawal by Springfield of the legal proceedings initiated against the Claimants before Ghanaian courts.[126]

189. On 6 November 2020, the MoE rejected Eni's requests and stated that "compliance with the terms and conditions imposed by [the October Directive] is non-negotiable", adding that it would soon share with Eni and Springfield a Draft UUOA (the "November Directive" and, together with the April Directive and the October Directive, the "Unitisation Directives").[127]

190. Still on 6 November 2020, the MoE shared with Springfield and Eni a Draft UUOA proposing the terms and conditions for the unitisation and unit operations of the Afina

123 Exh. C-31, Letter from the MoE to Eni and Springfield, 14 October 2020.

124 Exh. C-33, Letter from the MoE to Eni, 15 October 2020.

125 Exh. C-34, Letter from the Claimants to the MoE, 28 October 2020, ¶¶ 2-4.

126 Exh. C-34, Letter from the Claimants to the MoE, 28 October 2020.

127 Exh. C-36, Letter from the MoE to Eni, 6 November 2020.

field and the Sankofa field in the WCTP2 and OCTP areas, respectively.[128] The Claimants received this letter on 17 November 2020.[129]

191. On 24 November 2020, the Claimants replied to the MoE that there was no legal basis for the imposition of conditions for the unitisation of the relevant areas. They reiterated their position that the required data exchanges had not taken place, and that the October and November Directives violated their rights under the Petroleum Agreement and under international and domestic law. As a consequence, the Claimants stated that they would soon initiate proceedings to enforce their rights as necessary.[130]

192. On 4 December 2020, on the basis of previous communications sent to the MoE regarding the October and November Directives, the Claimants sent to the MoE a Notice of Dispute pursuant to Article 24(1) of the Petroleum Agreement.[131]

193. On 22 December 2020, the Claimants, GNCP and the MoE met upon the invitation of the latter to discuss the findings of the 2020 GNPC Report "and a mutually beneficial solution to the subject matter of the dispute."[132] At the meeting, it was agreed that a technical team would be put together to assess the 2020 GNPC Report that had grounded the terms and conditions of the unitisation as set out in the October and November Directives. This technical working group would include a technical team from the MoE, as well as three people to be nominated by the OCPT partners, i.e. the Claimants (the "Joint Technical Team").[133]

194. On 23 December 2020, the MoE sent a letter to Eni, summarizing the meeting of 22 December and inviting it to submit its nominees for the Joint Technical Team by 30 December 2020.[134]

195. On 24 December 2020, the Claimants followed up on the meeting with the MoE and GNPC with a letter in which they requested the MoE to deliver to them the data that had been used in the preparation of the 2020 GNPC Report. They also asked the MoE

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128 Exh. C-37, Letter from the MoE to Eni and Springfield, 6 November 2020; Exh. C-38, Terms and Conditions for the Unitisation and Unit Operations of the Afina field and the Sankofa field.

129 Exh. C-35, Letter from the Claimants to the MoE, 24 November 2020, p. 1.

130 Exh. C-35, Letter from the Claimants to the MoE, 24 November 2020.

131 Exh. C-39, Claimants' Notice of Dispute to the MoE, 4 December 2020.

132 Exh. C-41, Letter from the MoE to the Claimants, 23 December 2020.

133 Exh. C-41, Letter from the MoE to the Claimants, 23 December 2020, p. 1.

134 Exh. C-41, Letter from the MoE to the Claimants, 23 December 2020, p. 1.

to withdraw the October and November Directives, as it had been discussed in the meeting.[135]

196. The MoE replied on 30 December 2020 by stating that the 2020 GNPC Report "was based on Eni's own data", and that therefore there was no further data to share with the Claimants. It thereby rejected the Claimants' request for the withdrawal of the October and November Directives pending the assessment of the Joint Technical Team that would include members appointed by the OCPT partners.[136] The MoE further highlighted that, as agreed between the parties at the meeting of 22 December, it was to send a letter to the Claimants inviting them to nominate the three representatives of the OCPT partners for the Joint Technical Team.[137] Further to its letter of 23 December, the MoE requested the Claimants to submit the names of their nominees for the Joint Technical Team by 5 January 2021.[138]

197. On the same day of 30 December 2020, the Claimants reiterated to the MoE that they would prepare terms of reference concerning the work to be conducted for the potential unitisation, and nominate the OCPT partners' members for the Joint Technical Team, subject to the MoE withdrawing the October and November Directives and Springfield withdrawing the court proceedings initiated against the Claimants.[139]

198. On 6 January 2021, the Claimants sent the MoE draft terms of reference to guide the tasks and objectives of the Joint Technical Team.[140] It also reiterated its request that the court action started by Springfield be withdrawn but confirmed its willingness to progress the technical work with the MoE and GNPC "in anticipation of the withdrawal of those proceedings".

199. On 14 January 2021, the MoE replied that it could not execute the draft terms of reference proposed by the Claimants, since they did not give effect to the October and November Directives. It urged the Claimants to nominate members to the Joint

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135 This letter is referred in Exh. C-42, Letter from the MoE to the Claimants, 30 December 2020.

136 Exh. C-42, Letter from the MoE to the Claimants, 30 December 2020.

137 Exh. C-42, Letter from the MoE to the Claimants, 30 December 2020, p. 2.

138 Exh. C-42, Letter from the MoE to the Claimants, 30 December 2020, p. 2. The letter refers to "January 5, 2020", but this date is understood to refer to 5 January 2021, given that the letter itself is dated 30 December 2020.

139 Exh. C-115, Letter from the Claimants to the MoE, 30 December 2020.

140 Exh. C-43, Letter from the Claimants to the MoE, 6 January 2021.

Technical Team on behalf of the OCPT partners, and explained that it could not force Springfield to discontinue the proceedings before Ghanaian courts.[141]

200. On 29 January 2021, the Claimants sent a further Notice of Dispute on GNPC pursuant to Article 24.1 of the Petroleum Agreement alleging that by virtue of producing the 2018 GNPC Report, GNPC had enabled the MoE's "unlawful conduct" as regards the purported unitisation.[142]

201. In early 2021, a number of meetings took place involving the Claimants, the MoE, the Petroleum Commission and GNPC, for the purpose of providing the Claimants with the data underlying the 2020 GNPC Report.[143] Springfield did not take part in these meetings.[144]

202. As a result of these meetings, on 22 March 2021, the Claimants, on the one hand, and the Petroleum Commission, on the other hand, entered into a confidentiality agreement. On 25 March 2021, by virtue of such agreement, the Petroleum Commission shared with the Claimants certain data of the Afina Discovery that had been used in preparation of the 2020 GNPC Report.[145] According to the Claimants, they received some, but not all, the relevant data.[146] By contrast, the Respondents consider that, by the end of March 2021, the Claimants had received all the agreed-upon data.[147]

203. On 9 April 2021, a meeting was held between the Claimants, the MoE, GNPC, the Petroleum Commission and the Ghanaian President.[148] Pursuant to the Claimants' letter of 12 April 2021, the Claimants informed the President at the meeting that they would file proceedings for the review of the October Directive. However, they underscored that they remained committed to find common ground in respect of the unitisation process, for which they would continue to analyse the data of the Afina

141 Exh. C-44, Letter from the MoE to the Claimants, 14 January 2021.

142 Exh. C-40, Claimants' Notice of Dispute to GNPC, 29 January 2021.

143 SoC, ¶ 136; SoD, ¶ 174.

144 Witness Statement of Hon. Andrew Mercer, ¶ 18.

145 Exh. C-45, Confidentiality Agreement between the Claimants and the Petroleum Commission, 22 March 2021; NoA, ¶ 71.

146 NoA, ¶ 71.

147 SoD, ¶ 177.

148 NoA, ¶ 73; SoD, ¶ 178.

Discovery they had received pursuant to the confidentiality agreement with the Petroleum Commission.[149]

204. On 12 April 2021, a further meeting was held between the Claimants, the MoE, the Petroleum Commission and GNPC. The minutes of this meeting prepared by the Claimants show that, in the MoE's and GNPC's understanding, as a result of the meeting with the President on 9 April, the Claimants had undertaken to write a letter to the MoE stating that they did not oppose the unitisation process and that the issue that remained pending was the determination of the tract percentages. The MoE would then instruct Springfield to suspend the court proceedings against the Claimants.[150]

205. On the same date, the Claimants delivered a letter to the MoE summarizing the content of the meeting with the President and stating that, irrespective of their "continued commitment to a fair, and amicable negotiation", they would be applying for a judicial review of the October Directive, given the imminent expiry of the relevant statutory time limit.[151]

206. Still on 12 April 2021, as further explained below, the Claimants filed for judicial review before the Ghanaian courts in order to have the October and November Directives quashed.[152] Simultaneously, the Petroleum Commission requested the Claimants to return all the confidential information they had received pursuant to the confidentiality agreement by 16 April 2021.[153] Since the confidentiality agreement itself allowed the Claimants to return the information as late as 15 days after a request by the Petroleum Commission, the Claimants answered that they would return the data within that time.[154]

207. On 13 April 2021, the MoE replied to the Claimants' letter of 12 April, indicating that such letter did not reflect the agreed outcome of the meeting of 9 April with the President, as the Claimants had reneged on their promise to the President to confirm

149 Exh. C-46, Letter from the Claimants to the MoE, 12 April 2021.

150 Exh. C-121, Minutes of the Meeting with the MoE, 12 April 2021.

151 Exh. C-46, Letter from the Claimants to the MoE, 12 April 2021.

152 Exh. C-48, Originating Notice of Motion for Judicial Review, 12 April 2021.

153 Exh. C-49, Letter from the Petroleum Commission to the Claimants, 12 April 2021.

154 NoA, ¶ 77.

their intent to proceed with the unitisation provided that the tract participation would be determined after a technical assessment.[155]

208. On 14 April 2021, the Claimants wrote a letter to the President of Ghana indicating that they were "not against any potential unitisation, provided it is the outcome of a fair and transparent process".[156]

209. On 26 April 2021, the Claimants returned the information they had received concerning the Afina Discovery to the Petroleum Commission. In parallel, they sent to the MoE a report that they had prepared summarizing their findings based on such information entitled "Technical Evaluation Of The Afina Discovery In Relation To Sankofa East Cenomanian Oil Field" (the "Claimants' Technical Report").[157] The Parties disagree on the scope and content of the findings of the Claimants' Technical Report, and whether it suffices to confirm a hydrocarbon accumulation that merits unitisation.[158]

210. On 17 May 2021, the MoE delivered to the Claimants its Review of Eni's Technical Evaluation of the Afina Discovery.[159] In the cover letter, the MoE noted that it was in agreement with Eni's position that seemingly corroborated the findings of the 2020 GNPC Report and thus the fulfilment of the requirements for unitisation.[160] Consequently, the MoE invited Eni to a meeting on 15 June to further discuss these conclusions.

211. On 15 June 2021, the MoE, the Petroleum Commission, GNPC and the Claimants held a meeting. Pursuant to the minutes of the meeting prepared by the Claimants, the MoE's representative indicated that the Afina Discovery's potential for commercialization was irrelevant to the discussion on unitisation, as the sole criterion for unitisation was the straddling of hydrocarbons across the two blocks.[161] The Claimants "did not agree with [this] position".[162] They emphasized that it was necessary

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155 Exh. C-47, Letter from the MoE to the Claimants, 13 April 2021.

156 Exh. C-122, Letter from the Claimants to the Ghanaian President, 14 April 2021.

157 Exh. C-124, Letter from the Claimants to the MoE, 26 April 2021; Exh. C-125, Technical Evaluation of the Afina Discovery in relation to Sankofa East Cenomanian Oil Field, 26 April 2021.

158 NoA, ¶ 78; SoC, ¶ 146; SoD, ¶¶ 181-182.

159 Exh. C-50, Letter from the MoE to the Claimants, 17 April 2021, attaching the Review of Eni's Technical Evaluation of the Afina Discovery.

160 Exh. C-50, Letter from the MoE to the Claimants, 17 April 2021, p. 1.

161 Exh. C-51, Minutes of the Meeting between the Claimants and the MoE, 15 June 2021.

162 Exh. C-51, Minutes of the Meeting between the Claimants and the MoE, 15 June 2021, p. 2.

to carry out a test of the Afina well in order to complete the evaluation process, to which GNPC replied that the test was not a requirement and that, in any event, it did not know why Springfield had not conducted such test but would find out from Springfield.

212. On 21 July 2021, another meeting took place attended by the President of Ghana, the Claimants, the MoE and GNPC. The content of the meeting is disputed. According to their report of the meeting, the Claimants reiterated that they were not opposed to unitisation as long as it was effected through a transparent and fair process in accordance with applicable law.[163] They also indicated that they would proceed with the negotiations for a potential unitisation provided that the October and November Directives were suspended, and Springfield suspended its court action against the Claimants.[164] On the other hand, according to the Heads of Decision ("HoD") prepared by the MoE, at the meeting the parties agreed to: (i) the unitisation of the Afina Discovery and the Sankofa Field; (ii) a future redetermination of the tract participation; (iii) the fulfillment of all orders delivered by the courts; and (iv) the future suspension of all further judicial proceedings initiated before the Ghanaian courts.[165] The MoE invited all parties involved to sign the HoD at a meeting to be held on 30 July 2021.

213. On 28 July 2021, the MoE delivered a letter to Eni communicating its intention to undertake a comprehensive audit of the OCTP contract area, including Eni's level of compliance with the provisions of the Petroleum Agreement and with Ghanaian tax laws.[166]

214. On 29 July 2021, the Claimants informed the MoE that they would be unable to attend the meeting of 30 July as they needed more time to review the proposed HoD.[167]

215. On 30 July 2021, the MoE, GNPC and Springfield signed the HoD.[168] The Claimants did not attend the meeting and did not sign the document.[169] On the same date, the

163 Exh. C-56, Letter from the Claimants to the President of Ghana, 26 July 2021.

164 Exh. C-56, Letter from the Claimants to the President of Ghana, 26 July 2021.

165 Exh. C-57, Heads of Decision pursuant to the Meeting of 21 July 2021, 27 July 2021.

166 Exh. C-59, Letter from the MoE to Eni, 28 July 2021.

167 Exh. C-58, Letter from the Claimants to the MoE, 29 July 2021.

168 NoA, ¶ 89; SoD, ¶ 198.

169 NoA, ¶ 87; SoD, ¶ 196.

Claimants wrote to the President of Ghana in order to request a further meeting on 4 August 2021.[170]

216. On 3 August 2021, the Claimants sent a letter to the MoE contending that the HoD did not reflect the discussions at the 21 July meeting.[171] They reiterated their position that the agreement had been to suspend the October and November Directives, as well as the ongoing judicial proceedings.

217. On 5 August 2021, the MoE replied to the Claimants' letter indicating that the HoD were an accurate reflection of the meeting of 21 July.[172]

218. On 10 August 2021, the Claimants informed the MoE that they would initiate arbitration proceedings pursuant to the Petroleum Agreement and the Notices of Dispute sent to Ghana and to the GNPC on 4 December 2020 and 29 January 2021.[173]

C. JUDICIAL PROCEEDINGS CONCERNING UNITISATION

1. Proceedings initiated by Springfield against the Claimants

219. On 10 July 2020, Springfield filed a writ of summons against the Claimants before the Ghanaian courts to force the Claimants to comply with the April Directive and to enter into negotiations with Springfield to implement the unitisation of the Sankofa Field and the Afina Discovery.[174]

220. On 15 July 2020, Springfield further lodged an Application for an Order for the Preservation of Funds before the High Court.[175] The application sought an order from the Ghanaian courts for the preservation of the Claimants' revenues from the Sankofa Field by virtue of the OCPT Project pending the final determination of Springfield's lawsuit.

221. On 28 July 2020, the Claimants requested the High Court to dismiss Springfield's substantive claim for lack of a reasonable cause of action and Springfield's lack of

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170 Exh. C-135, Letter from the Claimants to the President, 30 July 2021.

171 Exh. C-63, Letter from the Claimants to the MoE, 3 August 2021.

172 Exh. C-64, Letter from the MoE to the Claimants, 5 August 2021.

173 Exh. C-65, Letter from the Claimants to the MoE, 10 August 2021.

174 Exh. C-22, Writ of Summons issued by Springfield, 10 July 2020.

175 Exh. C-23, Motion on Notice, Application for an Order for the Preservation of Funds, 15 July 2020.

capacity.[176] On 3 September 2020, the High Court denied such request.[177] On 15 September 2020, the Claimants appealed from that judgment before the Court of Appeal.[178] On 22 February 2021, the Court of Appeal dismissed the Claimants' appeal.[179]

222. On 25 June 2021, the High Court of Ghana partially granted Springfield's interim application, ordering that 30 per cent (30%) of the Claimants' revenues from the operation of the Sankofa Field be preserved in an account designated for that purpose.[180] On 2 July 2021, the Claimants appealed that order before the Court of Appeal.[181] They also requested that the execution of the order be stayed.[182] That request for stay was denied by the Court of Appeal, which decision was also appealed.[183] The Claimants appeals and requests were all ultimately dismissed.[184]

223. On 24 January 2022, following Springfield's application for the appointment of a bank to receive and hold the revenues, the High Court ordered the Claimants to deposit the required funds into court.[185]

224. On 31 January 2022, the Claimants filed an appeal against the High Court's ruling of 24 January and applied for an order staying execution of that ruling.[186] On 1 February 2022, the High Court issued a penal notice against the Claimants in connection with its ruling of 24 January 2022, ordering them to pay into the court 30% of the revenues as provided in its Order of 25 June 2021 under penalty of execution.[187]

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176 Exh. R-41, Motion on notice to strike out plaintiff's pleadings and dismiss suit, 28 July 2020.

177 Exh. C-24, Ruling of the Ghanaian High Court of Justice, 3 September 2020.

178 Exh. R-46, Notice of Appeal, 15 September 2020.

179 Exh. R-51, Ruling of the Court of Appeal, 22 February 2021.

180 Exh. C-132, Order for the Preservation and Injunction, High Court of Justice, Commercial Division, 25 June 2021.

181 Exh. C-52 and Exh. C-53, Notices of Appeal before the Court of Appeal, 2 July 2021.

182 Exh. C-52 and Exh. C-53, Notices of Appeal before the Court of Appeal, 2 July 2021.

183 Exh. R-62, Ruling of the Court of Appeal, 22 July 2021; SOC, Annex B, p. 4.

184 SoC, Annex B, p. 4.

185 Exh. C-138, Ruling of the Ghanaian High Court, 24 January 2022; Exh. C-139, Order of the Ghanaian High Court for the Payment of Money into Court, 24 January 2022.

186 SoC, Annex B, p. 6.

187 Exh. C-142, Penal Notice of the Ghanaian High Court, 1 February 2022.

2. Judicial review initiated by the Claimants

225. On 12 April 2021, the Claimants initiated judicial review proceedings before the Ghanaian courts, whereby they sought to challenge the validity of the October and November Directives.[188]

226. On 1 July 2021, the Attorney General submitted its Statement of Case in these proceedings,[189] and on 21 July 2021 Springfield filed submissions as an interested party following the Court's authorization.[190]

227. On 21 October 2021, the High Court dismissed the proceedings summarily,[191] in a judgment that the Claimants appealed on 17 January 2022, before the Court of Appeal.[192] To the Tribunal's knowledge, the Court of Appeal has not handed down its decision and the proceedings are still pending.

IV. ANALYSIS

228. In this part, the Tribunal analyzes the claims and counterclaims. Before setting out its analysis on each relevant point, the Tribunal summarizes the Parties' positions. The summary is not intended to be exhaustive. While the Tribunal has considered all of the Parties' fact allegations and legal arguments, it expressly refers only to those that it considers relevant and material to the outcome of its analysis.

A. ADVERSE INFERENCES

229. Each Party requests that the Tribunal draw adverse inferences from the opposing Party's failure to produce certain documents in the context of the document production phase.

188 Exh. C-48, Originating Notice of Motion for Judicial Review, 12 April 2021.

189 Exh. C-54, Ghanaian Attorney General's Statement of Case, 1 July 2021.

190 Exh. C-55, Interested Party's Statement of Case, 21 July 2021.

191 Exh. C-130, Ruling of the Ghanaian High Court, 21 October 2020.

192 Exh. C-168, Claimants' Notice of Appeal of the 21 October 2020 ruling, 17 January 2022.

230. The Claimants argue that, without sufficient justification, the Respondents failed to produce documents responsive to several of their requests[193] and seek the following adverse inferences:

a. The reservoir maps not produced by the Respondents would enable the Claimants to identify flaws in GNPC's methodology and calculations in the GNPC Report (which appears to draw on flawed assessments made by Springfield), further substantiating that the tract participations imposed were unjustified on the basis, for example, of GNPC relying on 'seismic picks' inconsistent with best international oilfield practice;

b. The analysis by ERC Equipoise (referred to in the Claimants' Request No. 2(e)) contains no evidence to support the Respondents' position that the technical pre-conditions for unitisation were satisfied, and Springfield's description of, or reliance on, this analysis in its Brief Technical Report dated January 2020[194] was therefore incorrect;

c. The correspondence, presentations, studies, reports and notes or minutes of meetings not produced by the Respondents in response to the Tribunal's order on the Claimants' Request No. 2 would confirm that the Respondents were aware of the technical pre-conditions for unitisation and the procedure to be followed, but proceeded even though these pre-conditions were not met;

d. The Respondents' internal records and correspondence on the meetings held on 19 August 2020, 22 December 2020, 23 March 2021, 9 April 2021, 12 April 2021, 30 May 2021, 15 June 2021, 21 July 2021, 30 July 2021, and 12 October 2021, which the Respondents failed to produce, would have confirmed that the Respondents' descriptions of those meetings in this arbitration are inaccurate; and

e. The Respondents' comments on Eni and Vitol's Internal Technical Report dated 26 April 2021, which the Respondents did not produce, would confirm

193 Exh. C-225, Letter from HSF to Tribunal, 31 January 2023 () and Exh. C-220 to C-224, its enclosures, various dates; Exh. C-227, Letter from HSF to Tribunal, 1 February 2023.

194 Exh. C-90, Brief Technical Report on the Extension of Sankofa Cenomanian Reservoir into West Cape Three Points Block 2, January 2020.

that the Respondents were aware that the necessary technical pre-conditions for unitisation had not been met.[195]

f. The Respondents have evaded the Claimants' request to produce copies of key correspondence alleged to have been exchanged between the Respondents and Springfield,[196] which correspondence, according to the Claimants, falls within the scope of the Tribunal's disclosure orders.[197] Accordingly, the Claimants seek an adverse inference that "the Respondents knowingly provided Springfield with the Claimants' confidential data and have taken steps to avoid disclosing that breach of the Petroleum Agreement to the Claimants."[198] In this respect, the Claimants note that the disclosure obtained under section 1782 (28 USC §1782) evidences that GCA, through Springfield, was in possession of the Claimants' confidential data, at the latest, from February 2020.[199]

231. The Respondents oppose the Claimants' request for adverse inferences and themselves seek inferences with respect to the following three categories of documents:

a. The Respondents note that the Claimants were ordered to produce all drafts of a unitisation and unit operating agreement ("UUOA") prepared by Claimants and/or Springfield between April and August 2020 in relation to the Sankofa-Afina unitisation.[200] However, they did not produce any documents and did not provide any explanation. The Respondents request the Tribunal to draw the inference that the Claimants did not even attempt to comply with the April Directive calling on the contract-holders to collaborate in drafting a UUOA.[201]

b. The Respondents note that the Claimants were ordered to produce "all communications … pertaining to a potential redetermination of tract

195 Reply, ¶ 243.

196 Letter from FH to HSF, 24 July 2023; Letter from FH to HSF, 2 August 2023; Letter from FH to HSF, 21 September 2023; Email chain between FH and HSF, email 29 September 2023.

197 Claimants' PHB, ¶ 35.

198 Claimants' PHB, ¶ 36.

199 Claimants' PHB, ¶¶ 177-182, 273-274.

200 Annex 2 to Procedural Order No. 2, p. 19 (Respondents' Document Request No. 8).

201 Rejoinder, ¶ 399.

participation in the Sankofa-Afina unitisation."[202] Despite the Tribunal's instruction to produce responsive documents and redact only "the relevant parts" that Claimants deem privileged,[203] Claimants produced a single document (that is heavily redacted and makes no mention of tract participation) and withheld more than 300 documents.[204] The Respondents thus request the Tribunal to draw the inference that had these documents been produced, they would have shown that Claimants have always been aware that the initial tract participation is provisional and subject to a redetermination by a third-party expert.[205]

c. Finally, the Respondents note that the Claimants were ordered to produce all financing contracts that would support their allegation that lenders could withdraw financing upon unitisation.[206] The Claimants produced none and withheld six documents,[207] despite the Tribunal's instruction that the Claimants' concern of commercial sensitivity was "unparticularized" and "[t]o the extent that specific responsive documents contain commercially sensitive information, the Claimants may redact such sensitive parts."[208] When requested to explain their failure to produce documents, they merely repeated that "the Log identifies six documents responsive to Request 21 which are, however, not produced on the basis that they are commercially confidential."[209] The Respondents ask the Tribunal to draw the inference that the Unitisation Directives will not negatively impact the existing financial and security structures of the OCTP Project.

232. The Tribunal will address the Parties' requests for adverse inferences if and when any such requests becomes relevant to its analysis.

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202 Annex 2 to Procedural Order No. 2, pp. 23-26 (Respondents' Document Request No. 10).

203 Annex 2 to Procedural Order No. 2, p. 26.

204 Exh. C-224, FH letter to HSF, 31 Jan. 2023, ¶ 6(c); Exh. R-152, FH letter to HSF, 7 Feb. 2023, ¶ 2(d); Claimants' Revised Privilege Log, 14 Feb. 2023.

205 Rejoinder, ¶ 400.

206 Annex 2 to Procedural Order No. 2, pp. 67-69 (Respondents' Document Request No. 21).

207 Exh. C-224, FH letter to HSF, 31 Jan. 2023, ¶ 6 (b); Exh. R-152, FH letter to HSF, 7 Feb. 2023, ¶ 2 (i).

208 Annex 2 to Procedural Order No. 2, p. 69.

209 HSF letter to Tribunal, 6 Jan. 2023.

B. LIABILITY

233. The Claimants contend that the unitisation that Ghana imposed on them violated fundamental procedural and substantive protections under Ghanaian law, the principles of fairness, transparency and reasonableness, as well as the Petroleum Agreement. The Respondents oppose these claims and contend that the possibility of unitisation was built into the applicable legal and contractual framework and that Ghana carried out the process in full compliance with such regime. Before setting out its analysis, the Tribunal summarizes the Parties' positions.

1. The Claimants' Position

234. The Claimants contend that the unitisation imposed by Ghana violated Ghanaian law as well as the Petroleum Agreement. They submit that the Unitisation Directives ordered by the MoE contravene the Petroleum Act and the Petroleum Regulations, as well as the Ghanaian Constitution and international best practices.

235. The Claimants admit that Section 34 of the Petroleum Act and Regulation 50 of the Petroleum Regulations afford the MoE discretion to impose unitisation. However, they claim that such discretion is subject to "the principles of good governance, including transparency and accountability" under Section 3 of the Petroleum Act, as well as Articles 23 and 296 of the Ghanaian Constitution, which guarantee fairness, reasonableness and transparency in administrative decision-making.[210]

236. The Claimants argue that the requirements of fairness and reasonableness in the context of unitisation call for compliance with international best practices, which provide for two essential substantive criteria for unitisation:

i. there must exist a single "accumulation of petroleum" that straddles the relevant contract area boundary; and

ii. the proposed unitisation must ensure optimum recovery of petroleum from the shared accumulation of petroleum.[211]

237. According to the Claimants, these criteria entail, first, that there must be dynamic pressure communication between the tracts in question and, second, that the concessions that are to be unitised must be commercially viable. These criteria, so the

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210 SoC, ¶ 188, citing: Exh. C-66, Petroleum Regulations, 2018; Exh. C-16, Petroleum Act, 2016.

211 Reply, ¶ 29, citing the first expert report of Prof. Raymond A. Atuguba ("Atuguba ER1") , ¶ 99.

Claimants argue, are based on best international practices as outlined in the Oil & Gas Handbook[212] and are also confirmed by the list of "preconditions" for unitisation listed in the Petroleum Commission's letter of 2 April 2020 to the MoE.[213]

238. It is the Claimants' submission that the MoE adopted the Unitisation Directives without ensuring that the Afina Discovery satisfied either of the two substantive criteria for unitisation. In addition, they complain that the MoE violated fundamental rules of procedural fairness and reasonableness.

a. Commerciality of the Afina Discovery has not been established

239. The Claimants refer to Section 34(1) of the Petroleum Act, according to which the purpose of unitisation is to ensure "optimum recovery of petroleum". Based on this provision and in reliance on best international practices, their assertion is that, prior to unitisation, it must be shown either (i) that all the separate tracts are commercial on a standalone basis or as a coordinated development and that the unit would be at least as commercial as a whole (and as economical as independent or coordinated developments would be); or (ii) that if one of the tracts is not commercial on a standalone basis or as a coordinated development, development of that tract as part of the unit will make the tract commercial while creating a net benefit (or at least no detriment) to the party with rights in the other tract.[214]

240. According to the Claimants, the requirement of commerciality is particularly important in the context of a green-brown unitisation, such as the present one. The "brown" tract, argue the Claimants, is de-risked because it has a proven record of commercial production, while the "green" tract carries significant risk given that it will require material investment to achieve production, if it is commercial at all.

241. The Claimants oppose the Respondents' argument that the requirement of commerciality is a post-unitisation concern. The Respondents' approach produces an absurd consequence, namely that the WCTP2 partners (chiefly Springfield) obtain a 54.545% interest in a multi-billion dollar project without having established that their discovery contains any recoverable hydrocarbons. Without proving commerciality, it is

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212 SoC, ¶¶ 180, 181, citing: Exh. C-165, Chapter 5, Unitisation and Redetermination.

213 SoC, ¶¶ 180, 181, citing: Exh. C-20, Letter from Petroleum Commission to the MoE, 2 April 2020.

214 Reply, ¶ 49, citing the second expert report by Mr. Matthew Wilks of SRL Consulting ("Wilks ER2"), ¶ 131.

impossible to assess whether the production of hydrocarbons from the Afina Discovery could in any way be affected by the separate development of the Sankofa Field.[215]

242. The Claimants refer to Springfield's own contemporaneous analysis, which according to them, demonstrates that the commerciality of the Afina Discovery is not stablished. In particular, Springfield identified a number of "show-stoppers", including the following:

> (a) productivity, injectivity, rock properties, reservoir quality, permeability and flow assurance (all of which are key parameters for establishing the commerciality of the Afina Discovery and whether any hydrocarbons could flow across the boundary); and
>
> (b) delineation of the Afina Discovery and fluid contacts (which are key parameters for establishing the extent of the Afina Discovery and any in-place volumes of oil).[216]

243. For Springfield, additional wells would be required to "derisk" these "show-stoppers", including a "down-dip appraisal well to prove the Base Estimated OWC and confirm STOIIP", "uncontaminated flowing sample required – DST samples", and "further seismic reservoir characterisation".[217] None of that work was done before the MoE proceeded to mandate unitisation.

244. The Claimants' expert, Mr. Wilks estimates that the costs of an appraisal programme consisting of re-entering of the Afina-1X well (to prove that commercial flow can be achieved) and drilling and testing one additional appraisal well would reach up to USD 153 million,[218] which corresponds to the amount of USD 150 million which Springfield sought from investors to "fund the originally planned appraisal campaign" in its unsuccessful May 2020 attempt to raise capital.[219]

245. Thus, in the Claimants' submission, the MoE's decision to unitise the Sankofa Field, which had years of proven profitability, with the Afina Discovery, which had no reliable data to support its commerciality, constituted a violation of the applicable Ghanaian law and best international practices.

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215 Reply, ¶ 63.

216 Reply, ¶ 76, citing: Exh. C-174, Presentation by Springfield titled "Afina – Appraisal Assessment Methodology", 11 March 2020, p. 3.

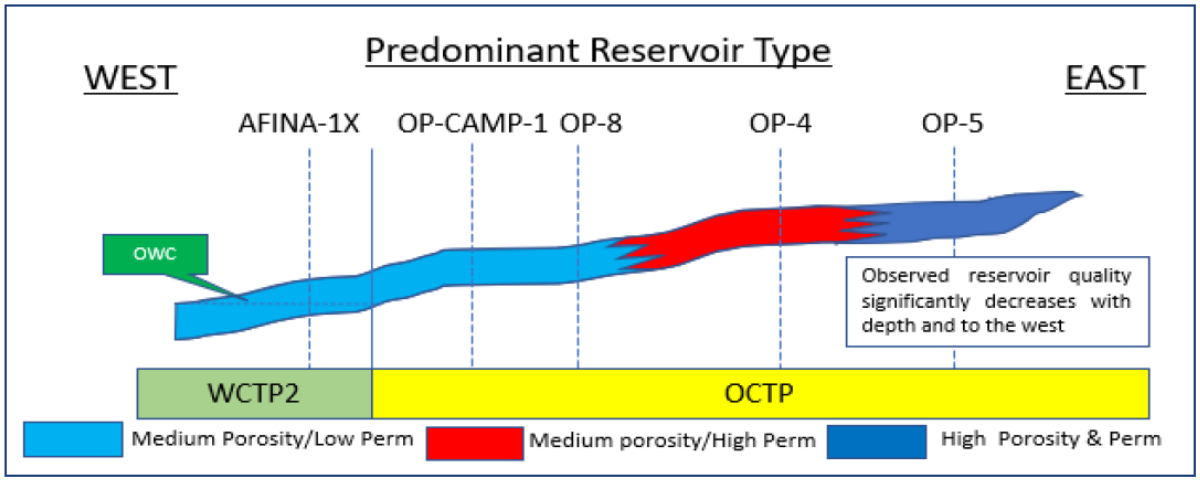
217 Reply, ¶ 76, citing: Exh. C-174, Presentation by Springfield titled "Afina – Appraisal Assessment Methodology", 11 March 2020.

218 Wilks ER2, ¶ 130.

219 Exh. C-94, Springfield's Information Memorandum, May 2020, p. 7.

246. In reliance on their expert, Mr. Wilks, the Claimants argue that the Afina Discovery is not likely to be commercial.[220] The best conditions for hydrocarbon extraction exist where there is high porosity and high permeability. These qualities, especially the latter, decrease with the depth of the reservoir.[221] Information taken from 20 wells and the Sankofa Field's historic production data, together with the data from the Afina 1-X well shows a clear trend of decreasing reservoir quality from east to west, continuing into WCTP2.

Figure 1: Distribution of porosity & permeability across the Sankofa Cenomanian channel



247. It is Mr. Wilks' opinion that the depth analysis "unequivocally demonstrates that there is significant reduction in permeability of three orders of magnitude with depth".[222] He finds confirmation of his opinion in the higher productivity of the wells in the eastern part of the Sankofa Field than the wells in the western area.

248. Therefore, opines Mr. Wilks, the Afina Discovery "has not been demonstrated to be commercial and has therefore not been declared commercial" and "there is an unacceptably low likelihood that any recovery from the Afina Discovery could ever be commercial".[223]

249. The Claimants thus conclude that the Unitisation Directives were not justified, as the Afina Discovery does not contribute any recoverable reserves to the unit. The

220 Reply, ¶¶ 104 et seq.

221 First expert report by Mr. Matthew Wilks of SRL Consulting ("Wilks ER1"), ¶¶ 20-24.

222 Wilks ER2, ¶ 88.

223 Wilks ER2, ¶ 137.

Directives rather had the effect of transferring part of the Claimants' share in a valuable asset to the WCTP2 partners for no consideration.[224]

b. Dynamic communication between Afina Discovery and Sankofa Field has not been established

250. The Claimants contend that it is common understanding between the Parties that dynamic communication is a mandatory prerequisite for unitisation. They refer to the following positions taken by the Respondents, their experts and Springfield on various occasions, which positions only make sense if dynamic communication is regarded as a criterion for unitisation:

a. The Respondents note in their SoD that "[w]ithout unitisation, when a petroleum accumulation extends across more than one contract area, the contractors with rights to the separate tracts have an incentive to engage in competitive and wasteful drilling to retrieve as much hydrocarbons as possible in their respective contract areas".[225]

b. The Petroleum Commission stated in its letter of 2 April 2020 that "[u]nitisation seeks to achieve the most efficient and economic exploration, development and exploitation of a common producing reservoir by the following (…) [a]voiding waste and optimising the levels of recovery, sharing of facilities, prevention of resource loss to one party".[226]

c. The Respondent's expert, Dr. Wright, observes that "[u]nitisation (…) [e]nables all owners of rights in the common reservoir to have a fair share of the production"[227] and that "unitisation of a straddling petroleum accumulation is undertaken to avoid wastage through competitive drilling, to minimize development costs and to maximize hydrocarbon recovery".[228]

d. Hon. Mercer, the Deputy Minister of Energy and the Respondents' witness, states that "[unitisation] also protects property rights in the separate contract areas, ensuring that an operator in one contract area does not extract petroleum

224 Reply, ¶ 113.

225 SoD, ¶ 56.

226 Exh. C-20, Letter from Petroleum Commission to the MoE, 2 April 2020.

227 First expert report by Stephen Wright of GCA ("Wright ER1"), ¶ 30.d.

228 Wright ER1, ¶ 43.

from another contract area (…) Ghana has purposefully not applied the 'law of capture', where the first concessionaire to extract hydrocarbons from a shared reservoir captures those gains to the exclusion of all other concessionaires'".[229]

e. In its first request for unitisation, Springfield commented that "[i]f both operators of OCTP and WCTP2 continue to independently develop the field based on the rule of capture, it would lead to accelerated loss of reservoir pressure and drive mechanism, a major reduction in the maximum ultimate recovery of the common reservoir and a competitive drilling and production practice by both operators".[230]

f. Following Springfield's third request for unitisation in January 2020, the MoE directed the Petroleum Commission to review such request to confirm that the "reservoir actually straddles the two contract areas and that the two reservoirs are indeed in pressure communication."[231]

251. While it has been common ground that the dynamic pressure communication was a prerequisite for unitisation, in its subsequent presentation of March 2020, Springfield acknowledged "uncertainty in the subsurface rock and fluid properties laterally between the wells" (i.e. Afina-1X and OP-8 in OCTP).[232] Springfield thus argued that it should not be required to clarify that uncertainty or establish dynamic communication because doing so could be costly and time consuming.[233]

252. According to the Claimants, within a month after Springfield's March 2020 presentation, without consulting the Claimants, the MoE proceeded to issue the April Directive, eventually imposing the UUOA on the Claimants without satisfying itself that the key criterion of dynamic communication was met. In this respect, the Claimants refer to the evidence of Respondents' expert, Dr. Wright, who admits that "[i]n most situations … appraisal of the straddling discovery is undertaken prior to the execution of the UUOA."[234] According to the Claimants, while the data available from the Sankofa Field

229 First witness statement of Hon. Andrew Mercer ("Mercer WS1"), ¶ 9.

230 Exh. C-10, Letter from Springfield to the MoE, 20 March 2018, p. 2.

231 Exh. C-172, Letter from MoE to the Petroleum Commission, 20 February 2020.

232 Exh. C-175, Presentation by Springfield titled "Evaluation of the Feasibility of Measurement of Confirmable Dynamic Communication between WCTP2 block and OCTP Block", 11 March 2020, p. 4.

233 Reply, ¶ 83.

234 Wright ER1, ¶ 71.

and Afina Discovery may have been sufficient for the parties to negotiate a pre-unitisation agreement ("PUA"), it is not sufficient for the execution (or imposition) of a UUOA.[235]

253. It is the Claimants' submission that the Afina and Sankofa fields are unlikely to be in dynamic pressure communication. In particular, the Claimants point to the fact that production has caused material pressure depletion in all production wells within the Sankofa Field.[236] Furthermore, the Sankofa Field wells drilled after production start-up (GI-4, OP-9 and OP-10) show clearly the effects of pressure depletion (OP-10, GI-4) or re-pressurisation (OP-9). This evidences clear dynamic communication between wells in the Eastern part of the Sankofa Field where permeability is high.

254. In contrast, say the Claimants, in the Sankofa Field's most western active producer well (OP-8ST2A), a pressure depletion of around 400psi was measured around the time that Afina-1X was drilled. The pressure data from Afina-1X, which indicates that the Afina Discovery remains in virgin pressure conditions, strongly suggest that there is no dynamic communication between Afina-1X and OP-8ST2A as production from the latter caused no propagation of pressure depletion downdip.[237]

255. In Claimants' view, the MoE issued the April Directive based on Springfield's presentation, which argued that establishing the existence of dynamic communication in the context of a "brown-green" unitisation is particularly difficult and may take several years given scarcity of information. The MoE blindly relied on Springfield's unsupported assertion, ignoring the inevitable logical conclusion: the longer it would take to demonstrate dynamic communication between the Afina Discovery and Sankofa Field, the poorer the quality of the reservoir between the two wells under observation and the lower the likelihood of dynamic communication.[238]

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235 Reply, ¶ 91.

236 Wilks ER1, ¶ 139.

237 Reply, ¶ 115, citing: Wilks ER1, ¶ 139; second witness statement of Mr. Giuseppe Valenti ("Valenti WS2") ¶ 36; Exh. C-125, Eni and Vitol's Technical Evaluation of the Afina Discovery, 26 April 2021, pp. 2, 15, 52.

238 Reply, ¶ 120, citing: Exh. C-175, Presentation by Springfield titled "Evaluation of the Feasibility of Measurement of Confirmable Dynamic Communication between WCTP2 block and OCTP Block", 11 March 2020; Exh. C-174, Presentation by Springfield titled "Evaluation of the Feasibility of Measurement of Confirmable Dynamic Communication between WCTP2 block and OCTP Block", 11 March 2020, p. 4.

256. Instead of affording the Claimants an opportunity to submit their counter-arguments, the MoE disregarded the prerequisites for unitisation, issued the April Directive less than a month after the Springfield presentation, and acted as though the Respondents had never considered dynamic communication to be a relevant criterion for unitisation.[239]

c. In any event, the MoE determined the tract participations arbitrarily

257. The Claimants submit that, even if the MoE's decision to unitise had been justified, which was not the case, the October Directive arbitrarily determined the tract participations of the OCTP and WCTP2 Parties at 45.455% and 54.545% respectively without any substantive basis.

258. According to the Claimants, in imposing the tract participations, the MoE adopted an inappropriate methodology and used extreme assumptions in relation to the estimate of oil volumes in-place in the Afina Discovery, which it transposed from a flawed GNPC report. The Respondents' own witness suggests that the 2020 GNPC Report was not intended to support an assessment of tract participations.[240]

259. The Claimants challenge the assumptions on which the MoE relied in determining the tract participations. Specifically, the MoE assumed a wholly unsubstantiated and objectively unjustifiable OWC within WCTP2. There is simply no basis for that assumption, which is clear from the 2020 GNPC Report itself,[241] the analyses performed by GCA,[242] and the analyses performed by the Claimants.[243]

260. The Claimants further criticize the methodology employed by the MoE as follows:

a. The MoE determined the tract participations based on estimated stock tank oil initially in place ("STOOIP") volumes within the Cenomanian fairway channel in each contact area. This is a static metric, which gives no consideration to value or recoverability of the in-place volumes;

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239 Reply, ¶ 123.

240 Reply, ¶ 130, citing Aryeetey WS1, ¶ 46.

241 Exh. C-32, 2020 GNPC Report, 6 October 2020, p. 19.

242 Exh. C-186, Report by GCA titled "Competent Person's Report, Afina Discovery (Afina 1-X), West Cape Three Points, Block 2, Ghana", April 2020, p. 13.

243 Exh. C-125, Eni and Vitol's Technical Evaluation of the Afina Discovery, 26 April 2021, pp. 3, 13-16, 75.

b. The MoE relied on a STOOIP figure of 642 Mmbls for the Afina Discovery, which was premised on an assumed OWC in the Afina Discovery of 4,130m of true vertical depth sub-sea ("TVDss").[244] A lower OWC means a larger area containing hydrocarbons and therefore a higher STOOIP figure. Taking this approach (as opposed to using the OWC inferred from the Afina-1X well) almost tripled the STOOIP figures of the Afina Discovery.[245]

c. The MoE adopted a STOOIP of 535 Mmbls for the Sankofa Field. That figure was taken from the updated OCTP PoD and assumes an OWC of 3,875m TVDss. An OWC of that level would be located well within the OCTP contract area. If the Afina Discovery and Sankofa Field were assumed to be a common pool in direct and continuous communication, they would need to be considered based on the same contact depth and using volumes with similar levels of certainty. In other words, the OWC used for the Sankofa Field would need to be higher which would materially increase STOOIP volumes.[246]

261. Finally, so the Claimants assert, the MoE failed to ensure consistency in the assumptions and methodologies used to determine volumes in WCTP2 and OCTP. Indeed, the MoE assumes an OWC at 4,130m TVDss in WCTP2 whereas the oil in OCTP is taken to end at 3,875m TVDss, which would be well within the OCTP contract area, implying that there is no hydrocarbon contact between the Sankofa Field and Afina Discovery. In other words, the assumptions relied upon by the MoE in its decision setting the tract participations show that there was no basis for imposing unitisation in the first place.[247]

d. The unitisation violated the applicable procedural rules

262. It is the Claimants' case that the MoE imposed the Unitisation Directives without observing the required procedures under the Petroleum Regulation and industry best practice. In particular, the Claimants complain of the following procedural shortcomings:

a. Regulation 5(4) envisages that the parties would need to submit to the MoE a draft unitisation agreement "within six months after the finalization of appraisal of the

244 Exh. C-32, GNPC Report, 6 October 2020, p. 26.

245 Exh. C-32, GNPC Report, 6 October 2020, p. 26.

246 Reply, ¶ 133.

247 Reply, ¶ 132.

petroleum agreement."[248] According to the Claimants, no such appraisal of the Afina Discovery took place and thus the requirement for the OCTP and WCTP2 Parties to submit a draft unitisation agreement to the MoE pursuant to Regulation 50(4) could not have been triggered. [249]

b. The MoE has consistently denied and/or obstructed the Claimants' access to the relevant (though incomplete) data on which the MoE relies;[250]

c. In any event, even if the preconditions for issuing the 9 April Directive had been made out (which the Claimants deny), the timeframes imposed were self-contradictory and did not comply with the requirements of the Petroleum Act or the Petroleum Regulations. More specifically:

    i. In the April Directive, the MoE directed the OCTP and WCTP2 Parties to submit to the MoE for approval "a draft unitisation and unit operating agreement" within 120 days.[251] The April Directive was subsequently suspended on 27 July 2020;[252]

    ii. On 19 August 2020, the MoE issued a new timeline for the unitisation process, incorrectly asserting that Eni had agreed to it at a meeting held that day.[253] Accordingly, the OCTP and WCTP2 parties were to execute a confidentiality agreement, exchange data, and produce a joint report setting out their "respective interest[s]" for the MoE's approval within 30 days;

    iii. Despite the MoE indicating on 4 September 2020 that "additional time would be given to complete the exercise when it becomes necessary",[254] without further notice, the MoE issued the October and November Directives in which it imposed unitisation terms with immediate effect. In

248 Exh. C-66, Petroleum Regulations,2018, p. 47.

249 SoC, ¶ 197.

250 SoC, ¶ 197.

251 Exh. C-11, Letter from the MoE to Eni and Springfield, 9 April 2020.

252 Exh. C-27, Letter from the MoE to Eni, 27 July 2020.

253 Exh. C-28, Letter from the MoE to Eni and Springfield, 19 August 2020.

254 Exh. C-30, Letter from the MoE to Eni, 4 September 2020.

doing so, it disregarded a letter of 15 October 2020 from the MoE, extending the deadline set in the MoE's letter of 19 August 2020.[255]

d. The MoE sent the Claimants a proposed (partial) UUOA but only after the Unitisation Directives imposing unitisation terms were issued. This effectively prevented the Claimants from exercising their right to be heard in the administrative proceedings.

263. The Claimants oppose the Respondents' argument that they "obstructed the unitisation process" or acted "as if [unitisation] was their decision to make".[256] As Professor Atuguba explains, in the Unitisation Directives, the MoE failed to meet the requirements of law under the Constitution, principles of administrative justice, the Petroleum Act and the Petroleum Regulations.[257] Accordingly, the Claimants were entitled to challenge those directives and cannot be criticized for seeking to do so. The Claimants' refusal to follow an unlawful directive voluntarily cannot constitute "obstruction".

e. The MoE violated the applicable principles of fairness, transparency and reasonableness

264. It is the Claimants' further submission that the MoE fell short of the standards required under the Ghanaian Constitution and the Petroleum Act in relation to the purported unitisation and more generally in its dealings with the Claimants. In particular, the Claimants complain of the following shortcomings:

265. First, the MoE attributed to Springfield an unfair advantage by not requiring it to complete an appraisal for the Afina Discovery, contrary to the requirements of the WCTP2 agreement, Ghanaian law, and industry practice. In reliance on the incomplete and insufficient data provided by Springfield, the MoE issued unitisation orders without (i) satisfying the substantive requirements of the Petroleum Act and (ii) observing the procedure stipulated in the Petroleum Regulations.[258]

266. Second, the MoE relied on reports produced by GNPC, which was purportedly appointed as an 'independent' third party even though it is obviously not independent given that it is controlled by Ghana and a party to both the OCTP and WCTP2

255 Exh. C-33, Letter from the MoE to Eni, 15 October 2020.

256 Reply, ¶ 209, citing SoD, ¶¶ 138-152, 165, 260.

257 Atuguba ER1, section 4.

258 SoC, ¶¶ 188-95.

Petroleum Agreements. The GNPC Report on which the Unitisation Directives were based is methodologically and technically flawed and does not support the case for unitisation. While the Claimants provided the MoE with the Claimants' Technical Report setting out some of the flaws in the 2020 GNPC Report, the MoE failed to engage meaningfully with the Claimants and wrongly asserted that the Claimants' report corroborated the key points necessary for unitisation.[259]

267. Third, the MoE has refused or obstructed the Claimants' access to the underlying data on which the unitisation decision was based and which is needed to assess whether the unitisation requirements were met. The MoE did not voluntarily share crucial data which only made its way to the Claimants through discovery in the Ghanaian courts. The MoE provided some information but subject to strict confidentiality requirements, then demanded it back in short order for reasons of confidentiality. Eventually, the Respondents produced the key information, namely the Afina Data, in February 2022 in this arbitration after months of correspondence and under threat of an application to the Tribunal.

268. Fourth, the MoE misrepresented the content of the documents upon which it relied. In the April Directive, the MoE referred to the 2 April 2020 letter from the Petroleum Commission and asserted that such letter concluded that the Sankofa Field and Afina Discovery accumulations "were one and the same".[260] However, this is not what the letter says, as the Claimants discovered when it was eventually disclosed, despite the MoE's attempts to withhold it. In the letter, the Petroleum Commission noted that GNPC was not "independent" and informed the MoE that the preconditions for unitisation according to Ghanaian law and best international oilfield practice for unitisation had not been made out.[261]

269. Fifth, the MoE assured the Claimants in August 2020 that it had "engaged an independent third party of international repute" to consider the terms of the

259 SoC, ¶¶ 147-155, citing: Exh. C-50 Letter from the MoE to Eni and Vitol, 17 May 2021; first witness statement of Mr. Giuseppe Valenti ("Valenti WS1"), ¶ 65.

260 Exh. C-11, Letter from the MoE to Eni and Springfield, 9 April 2020.

261 Exh. C-20, Letter from the Petroleum Commission to the MoE, 2 April 2020.

unitisation.[262] Yet, now even the Respondents accept that this assertion was not true and that the MoE never instructed an independent expert to undertake that analysis.[263]

270. Sixth, at the 21 July 2021 meeting between the Claimants, the President, and the MoE, the parties decided to enter into HoD agreeing (i) to the suspension of the Unitisation Directives; (ii) to the suspension of the Judicial Review Proceedings and Springfield's litigation against the Claimants; and that (iii), provided conditions (i) and (ii) were met, the Claimants would negotiate a PUA with Springfield on the basis of the Claimants' Technical Report.[264] However, the purported HoD which the MoE subsequently circulated misrepresented this agreement as it wrongly noted that the parties had agreed to (i) unitise the Sankofa Field and the Afina Discovery immediately on the unitisation terms imposed by the MoE; (ii) consider the technical basis for unitisation only in the context of a subsequent equitable redetermination of the parties' tract participations; (iii) comply with all court orders (despite the Claimants' pending appeals); and (iv) suspend all judicial processes in the courts. According to the Claimants, this distortion of the agreements reached, could not have been a mere oversight.

271. Seventh, at various meetings that took place between February and October 2021, the Minister of Energy displayed his personal hostility and bias against the Claimants by making repeated accusations and threats, including that the MoE would enforce unitisation irrespective of the judicial review proceedings, and that it would replace Eni as the operator of the Sankofa field.[265]

f. The unitisation violated the Petroleum Agreement

272. The Claimants submit that through the MoE's conduct, Ghana violated the Petroleum Agreement and GNPC supported and facilitated such breaches. The Claimants specifically refer to the following contractual rights that they claim were infringed by the Unitisation Directives as described in the preceding section:

262 Exh. C-28, Letter from the MoE to Eni and Springfield, 19 August 2020.

263 Reply, ¶ 175, citing SoD, ¶ 143.

264 Exh. C-56, Letter from Eni and Vitol to the Executive Secretary of the President, 26 July 2021.

265 SoC, ¶¶ 155-156, citing Valenti WS1, ¶¶ 66-73.

a. The Claimants' exclusive right under Articles 2.1 and 9 of the Petroleum Agreement to conduct petroleum operations in the OCTP Contract Area, which includes the Sankofa Field;

b. The Parties' agreed distribution of the Gross Production of Crude Oil between the Ghana, GNPC and the Claimants pursuant to Article 10 of the Petroleum Agreement;

c. The preservation of confidentiality of all information and data provided by the Claimants to Ghana and GNPC pursuant to Article 16.4 of the Petroleum Agreement;

d. The Claimants' ownership under Article 19.1 of the Petroleum Agreement of the Petroleum distributed to them pursuant to the terms of the agreement;

e. The Claimants' entitlement under Article 13.1 of the Petroleum Agreement to receive and utilise freely abroad all the foreign currency obtained from the sale of the Petroleum assigned to them under the Petroleum Agreement;

f. The Claimants' ability pursuant to Article 6 of the Petroleum Agreement to manage the OCTP Petroleum Operations under the guidance of the Joint Management Committee ("JMC").

273. The Claimants argue that the October and November Directives violated all of these provisions of the Petroleum Agreement. The Directives together with Ghana's ongoing efforts to enforce unitisation constitute a clear expression of Ghana's intention not to perform its obligations under the Petroleum Agreement.

274. The Claimants refute the Respondents' argument that the Petroleum Agreement was subject to Ghanaian laws and regulations that envisaged the possibility of unitisation. They refer to the stabilization regime contained in Article 26 of the Petroleum Agreement, which consists of the following three key elements:

- A "**freezing clause**", ensuring the stabilisation of the contractual relationship and the Ghanaian legal framework to the extent it affects the relationship between the Parties:

> "As of the Effective Date of this Agreement and throughout its term, the State guarantees Contractor the stability of the terms and conditions of this Agreement as well as the fiscal and contractual framework hereof *specifically including those terms and conditions and that framework that are based upon or subject to the provisions of the laws and regulations of Ghana (and any interpretations thereof) including, without limitation, the Petroleum Income Tax Law, the Petroleum Law, the GNPC Law and those other laws, regulations and decrees that are applicable thereto*."[266]

- An "**intangibility clause**", preventing Ghana from impairing and unilaterally altering any of the rights and obligations under the Petroleum Agreement:

> "*The State, its departments and agencies, shall support this Agreement and shall take no action which prevents or impedes the due exercise and performance of rights and obligations of the Parties hereunder [...] This Agreements and the rights and obligations specified herein may not be modified, amended, altered or supplemented except upon the execution and delivery of a written agreement executed by the Parties. Any legislative or administrative act of the State or any of its agencies or subdivisions which purports to vary any such right or obligation shall, to the extent sought to be applied to this Agreement, constitute a breach of this Agreement by the State.*"

- An "**economic equilibrium clause"**, entitling a Party (by giving notice) to trigger a good faith renegotiation of provisions of the Petroleum Agreement between the Parties if that Party considers that "*a significant change in the circumstances prevailing at the time the Agreement was entered into, has occurred affecting the economic balance of the Agreement [...]*".

275. According to the Claimants, the Unitisation Directives would change the Claimants' rights under the Petroleum Agreement, contrary to the protection provided in the freezing and intangibility clauses. Thus, the MoE failed to guarantee the stability of the terms and conditions of the Petroleum Agreement and committed multiple breaches of the stabilisation provisions of the Petroleum Agreement.

276. The Claimants further contend that GNPC has facilitated Ghana's breaches of the Petroleum Agreement and Ghanaian and international law. Specifically, GNPC took active steps to advance or justify the purported unitisation of the Sankofa Field and Afina Discovery without ever raising the issue at the JMC, contrary to its joint management obligations under Article 2.2 of the Petroleum Agreement.

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266 Exh. C-1, Petroleum Agreement, 2 March 2006, Article 26.2.

g. The Respondents are estopped from denying the Claimants their entitlement to develop the OCTP Project

277. The Claimants invoke estoppel by convention, estoppel by representation and contractual estoppel to argue that the unitisation contravened the representations made in the Petroleum Agreement and thereafter, including in the PoD.[267]

278. With respect to estoppel by convention, the Claimants argue that it arises "where: (i) there was a common assumption of fact or law by the party raising the estoppel (C) and the party against whom the estoppel was raised (R); (ii) R had conveyed to C that R expected C to rely on the sharing of the common assumption such that R might be said to have assumed some element of responsibility for C's reliance on the common assumption; (iii) C had in fact relied on that common assumption rather than merely upon its own independent view of the matter; (iv) that reliance had occurred in connection with some subsequent mutual dealing between C and R; and (v) C thereby suffered some detriment, or R received some benefit, in such a way as to make it unconscionable for R to resile from the common assumption."[268]

279. The Claimants also invoke estoppel by representation, which they argue arises where there is: i) a representation of fact; ii) a position taken later that contradicts in substance the original representation; iii) the original representation was of a nature to induce and made with that intention and had the result of inducing the party raising the estoppel to alter his position on the faith of it and to his detriment; and iv) that the original representation was made by the party sought to be estopped to the party seeking to rely on the estoppel.[269] Finally, contractual estoppel to which the Claimants also refer, arises where parties have concluded a binding contract containing an acknowledgement of a state of affairs.

280. According to the Claimants, the requirements for these estoppels are fulfilled. Indeed, the Parties have proceeded on the common assumption that the OCTP Project would be developed in line with the approved PoD and the Claimants relied on that assumption when they invested in the OCTP Project on an integrated basis. As a

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267 Reply, ¶¶ 245-249.

268 Reply, ¶ 246, citing: Exh. CLA-13, *Tinkler v Revenue and Customs Commissioners* (2021) UKSC 39; (2022) AC 886.

269 Exh. CLA-14, *Spliethoff's Bevrachtingskantoor BV v Bank of China Ltd* (2015) EWHC 999 (Comm); (2015) 1 CLC 651 at 156.

consequence, argue the Claimants, the Respondents are estopped from denying that common assumption.

2. The Respondents' Position

281. The Respondents dispute that the unitisation violated Ghanaian law or any applicable principles and best practices. They deny that the applicable regulations contain the criteria of dynamic communication and commerciality. Instead, they authorise the MoE to impose unitisation in its discretion when there exists a "straddling accumulation" of petroleum. According to the Respondents, the MoE exercised this discretion in compliance with the applicable rules of procedure and the principles of fairness and rationality.

a. The substantive criterion for unitisation is straddling accumulation, not dynamic communication or commerciality

282. The Respondents refer to Section 34 of the Petroleum Act, which empowers the MoE to impose unitisation "[w]here an accumulation of petroleum extends beyond the boundaries of one contract area into one or more other contract".[270] The sole substantive criterion for unitisation that the law provides is therefore the existence of a straddling accumulation of petroleum, the position that Ghana has consistently maintained throughout, including in its past unitisation of the Jubilee field.[271]

283. The Respondents challenge that Ghana violated Ghanaian law by directing unitisation without first requiring proof of commerciality and dynamic communication through appraisal. The purported international standards to which the Claimants resort are not applicable in Ghana as "Ghana is a dualist State, and for international law to assume domestic legal character, it must be translated into domestic law."[272]

284. For the Respondents, the Claimants' argument that the legislative architecture of the Petroleum Act allows for the introduction of elusive international standards is equally unfounded, as the Ghanaian courts have held. [273]

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270 Exh. C-16, Petroleum Act, 2016, Section 34.

271 Rejoinder, ¶¶ 27 et seq., citing: Exh. R-4, Unitisation and Unit Operating Agreement Covering the Jubilee Field Unit Located Offshore in the Republic of Ghana, 13 July 2009.

272 Atuguba ER1, ¶ 31.

273 Exh. C-130, Ruling on Eni and Vitol's application for Judicial Review, 21 October 2021, pp. 2, 6.

285. Furthermore, the Respondents oppose the argument that the definition of "appraisal" in Section 95 of the Petroleum Act implies an obligation of the MoE to appraise dynamic communication before deciding unitisation. The definition makes no mention of unitisation, let alone demonstrates that appraisal is a precondition of unitisation.

286. The Claimants' own contemporaneous conduct, so the Respondents argue, contradicts their new interpretation of the Petroleum Act. In the context of CTP Block 4, the Claimants requested approval to undertake a joint and phased appraisal of their two separate discoveries of Eban and Akoma. They did so even though they had not previously proven dynamic communication or commerciality.[274]

287. As for the Claimants' reliance on Regulation 50 of the Petroleum Regulations, the Respondents underscore that such regulation is subsidiary to the Petroleum Act. In any event, Section 34(1) of the Petroleum Act deals with the MoE's authority to direct unitisation, while Regulation 50 deals with the contractors' obligations concerning the negotiation and approval of a unitisation agreement once the unitisation has been directed. The "agreement" to develop and produce the accumulation of petroleum as a single unit under Regulation 50 only becomes relevant after the Minister issues a directive to unitise.

288. The Respondents further oppose the Claimants' invocation of alleged "common sense" and "commercial reality" instead of the law. Contrary to the Claimants' arguments, the question of whether unitisation is justified is not "dictate[d]" by the short-term expectations of private contractors or their commercial interests. The question is governed by whether the State—as owner of the subsurface oil—considers that there are sufficient grounds to find that, under the circumstances of each case, unitisation will improve the net benefits (i.e., not just in terms of immediate profits to contractors, but also the development of the oil fields in a safe, secure, sustainable and efficient manner.[275]

289. The phrase "optimum recovery of petroleum" that is contained in the Petroleum Act and into which the Claimants read the requirements of commerciality and dynamic communication, does not carry a unique technical meaning that is specific to the context of unitisation, as Claimants suggest. It is consistent with the overarching

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274 Exh. R-71, Letter from Eni to the Petroleum Commission, 1 March 2022, p. 2; Exh. R-78, Letter from the Ministry of Energy to the Petroleum Commission, 20 July 2022.

275 Rejoinder, ¶ 57.

objective of the Petroleum Act "to provide for and ensure safe, secure, sustainable and efficient petroleum activities in order to achieve optimal long-term petroleum resource exploitation and utilisation for the benefit and welfare of the people of Ghana"; the same policy objectives are repeated throughout the Petroleum Act.[276]

290. According to the Respondents, this understanding stands in stark contrast with the phrase "an accumulation of petroleum [that] extends" beyond the boundaries of a contract area, which appears only in Sections 34(1), 34(4), and 35, all of which specifically deal with unitisation.[277]

291. Be that as it may, say the Respondents, pursuant to accepted international practice, the universal trigger for unitisation is a straddling accumulation, not commerciality or dynamic communication.[278] This is the opinion of the Respondents' expert Dr. Wright, while the Claimants' expert Mr. Wilks agrees that "confirmation of a straddle may lead to discussions of potential unitisation".[279]

292. Commerciality is not a prerequisite to unitisation, but should be confirmed through coordinated appraisal activities after unitisation is triggered. The Claimants' argument that a higher threshold exists for brown-green unitisations is not supported by any evidence. Renowned expert on unitisation, Paul Worthington, whom the Claimants themselves cite, states that "[t]he economic viability of developing and producing a straddling petroleum accumulation is established in the later stages of the reservoir appraisal process. It is very much dependent on estimates of future petroleum recovery based on subsurface models and on tenuous projections of commodity prices to the end of field life."[280]

293. According to the Respondents, the Claimants had the opportunity to conduct a coordinated appraisal of the straddling accumulation with Springfield after the April Directive, but they refused to engage. This resulted in the Minister imposing terms of

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276 SoD, ¶ 59.

277 Rejoinder, ¶ 62.

278 Rejoinder, ¶¶ 68 et seq., citing: Exh. C-156, Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of National Laws and Private Contracts, p. 29.

279 Second expert report by Stephen Wright of GCA ("Wright ER2"), ¶ 30; Wilks ER2, ¶ 34.

280 Rejoinder, ¶ 72, citing Exh. R-27, The Law On Petroleum Unitisation, Legislating For Effective Regulatory Governance, 2020, Ch. 8, p. 123.

unitisation on Claimants and Springfield in accordance with Regulation 50(6) of the 2018 Petroleum Regulations.[281]

294. Similarly, the Respondents argue that international practice does not require dynamic communication for unitisation. They stress that the Claimants are unable to refer to a single source that would indicate the contrary.[282]

295. International practice recognizes the right of States to compel unitisation when a reservoir straddles across different concession areas.[283] Compulsory unitisation is not only the norm in international practice, but also "a near-universal necessity," given that it allows the parties involved to overcome the complexities that arise from "different opinions of what is fair" among the private contractors.[284] The State's right to direct unitisation extends to brown-green unitisations.[285]

296. As a result, the Respondents conclude that the MoE acted within its powers when it imposed unitisation without appraising the alleged requirements of commerciality and dynamic communication.

b. There is a straddling accumulation across OCTP and WCTP2

297. For the Respondents, the fact that an accumulation straddles across OCTP and WCTP-2 is indisputable and has been confirmed by all relevant participants to the unitisation process, including the Claimants.

298. The Respondents explain that, following Springfield's two requests for unitisation in 2018, the MoE spent over two years compiling and analysing data, and actively engaged with Claimants, Springfield, GNPC, and the Petroleum Commission. By the time the Minister decided to stipulate the terms of unitisation, given the Claimants and Springfield's failure to conclude a unitisation agreement (or even to start the process of negotiating one), the MoE had satisfied itself of the existence of a straddling accumulation by requesting that Springfield acquire additional data through the drilling

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281 Rejoinder, ¶ 75.

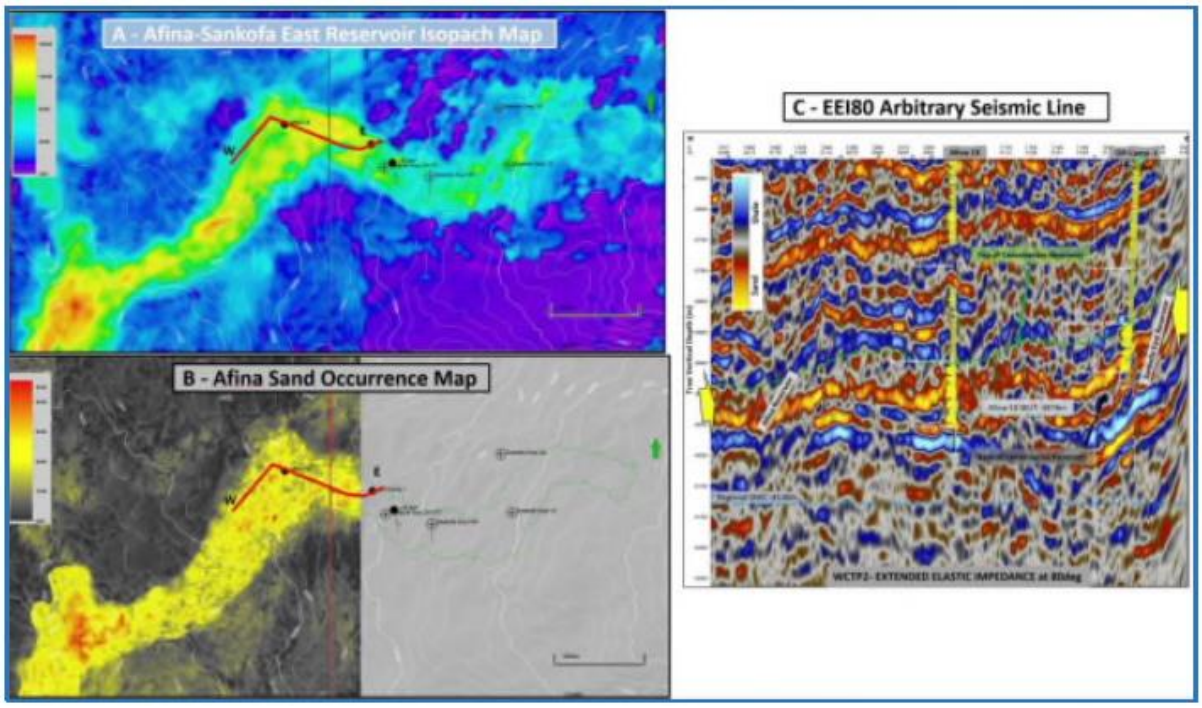
282 Rejoinder, ¶ 79.

283 Exh. R-27, The Law On Petroleum Unitisation, Legislating For Effective Regulatory Governance, 2020, Ch. 8, p. 132.

284 Exh. C-156, Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of National Laws and Private Contracts, p..

285 Wilks ER2, ¶ 43.

of the Afina-1X Well, and by considering analyses by GNPC,[286] the Petroleum Commission,[287] and Springfield[288] — all of which confirmed the existence of the extending accumulation. The following figure reproduces illustrations of the straddling accumulation, as shown in Springfield's report:[289]



299. As the Respondents' witness Mr. Aryeetey notes, "Claimants and their witnesses take issue with several technical points made in our contemporaneous analyses, but none of their comments take away from the fact that the available data has demonstrated the existence of a straddling accumulation."[290] Indeed, as the Respondents' expert Mr. Wilks demonstrated in his first report: "all of the reports prepared by Eni/Vitol, SEP and GNPC […] support the conclusion that the Cenomanian fairway extends from OCTP into WCTP-2, and that the oil-bearing Cenomanian reservoir penetrated in the Afina 1-X Well is the same interval as in the Sankofa Field."[291]

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286 Exh. R-22, Letter from GNPC to the Ministry, 5 June 2018. See also Aryeetey WS1, ¶¶ 42-43.

287 Exh. C-20, Letter from Petroleum Commission to the Ministry, 2 Apr. 2020, p. 5.

288 Exh. C-90, Brief Technical Report on the Extension of Sankofa Cenomanian Reservoir into West Cape Three Points Block 2, Jan. 2020.

289 Exh. R-49, Springfield, Report on the Further Evaluation of the Petroleum Accumulation Common to the Afina Discovery and the Sankofa Field for the Unitisation of Sankofa East and Afina, 2021, p. 17, Figures 4-5.

290 Second witness statement of Mr. Michael Nii Armah Aryeetey ("Aryeetey WS2"), ¶ 23.

291 Wilks ER1, ¶ 129.

300. In addition, evidence obtained during document production shows, so the Respondents argue, that the Claimants recognized the existence of a straddling accumulation between OCTP and WCTP-2 as early as 2016. Indeed, an internal information note on the subject "Ghana Offshore Tano Basin – Farm-in Opportunity in West Cape Three Points Block 2" dated 17 July 2016 shows that the possible straddling accumulation between OCTP and WCTP-2 was a key reason why Eni decided to enter Springfield's data room: "[t]he main motivation that led for Eni Ghana to visit the data room organized by Springfield is the probable westward extension within Block 2 of the OCTP Sankofa East oil Field (Cenomanian API 30° oil)."[292]

301. Eni further confirmed its understanding that the Sankofa Field extended into WCTP-2 in another internal note prepared three months later and seeking authorization to pursue its interest in WCTP-2.[293] Again in April 2021, the Claimants' "Technical Evaluation of the Afina Discovery" corroborated the existence of the straddle.[294] The Claimants reiterated this finding in a meeting in May 2021 meeting with GNPC, where they stated that the "conclusions from the report confirm that Sankofa and Afina lie along the same depositional fairway and hydrocarbon fluids have a similar composition."[295]

302. Therefore, for the Respondents, there is no doubt that a straddling accumulation exists across OCTP and WCTP2, which was the only substantive criterion that triggered the MoE's decision to commence unitisation.

303. In any event, with reference to their expert evidence, the Respondents assert that the Claimants' assessments that there is no dynamic communication between the Sankofa and Afina fields and that the Afina is not a commercial discovery are deeply flawed. Assuming these irrelevant criteria were to apply, the Claimants would not have proven that they were satisfied.[296]

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292 Rejoinder, ¶ 93, citing: Exh. R-93, Informational Memo: Ghana Offshore Tano Basin - Farm-in Opportunity in West Cape Three Points Block 2, 17 July 2016, p. 3.

293 Exh. R-98, Authorizing Memorandum: "West Cape Three Points Block 2: New exploration initiative in offshore Ghana", 15 Sept. 2016, p. 1.

294 Exh. C-125, Eni and Vitol's Technical Evaluation of the Afina Discovery, 26 Apr. 2021.

295 Exh. C-128, Slides titled "Technical Evaluation of the Afina Discovery in Relation to Sankofa East Cenomanian Oil Field", 30 May 2021, p. 13.

296 Rejoinder, ¶¶ 101-133.

c. The Tribunal must accord deference to the MoE decisions and subsequent judicial review process

304. The Respondents argue that this Tribunal must not undertake a *de novo* review of the Unitisation Directives, given that Ghanaian law accords the Minister substantial deference to take administrative action. In their submission, a reviewing court or tribunal's role is simply to ensure that the Minister's action falls within a range of possible, acceptable outcomes. The Claimants' own legal expert admits as much when he observes that a Minister's decision is judged on the standard of reasonableness, which "is a deferential standard and is concerned mostly with whether a decision made is justifiable, transparent and intelligible and whether the decision falls within a range of possible, acceptable outcomes."[297]

305. Correlative to the deferential standard of review, the Respondents' argument continues, is the Claimants' heightened burdens of proof and persuasion.[298] As explained by Professor Abotsi, the Respondents' legal expert on Ghanaian administrative and constitutional law, under Ghanaian law those burdens are heightened when challenging the actions of a Minister acting within his or her discretionary power.[299] In other words, it is insufficient that the Claimants prove that the Minister interpreted the Petroleum Act and Petroleum Regulations incorrectly; they must establish that the Minister's interpretation of the Act and Regulations and the consequential issuance of the Unitisation Directives was so unreasonable that it was not within a range of possible, acceptable interpretations. According to the Respondents, the Claimants clearly fall short of such standard of proof.

306. In addition, the Respondents point to the fact that the Ghanaian judiciary already entertained a judicial review of the Unitisation Directives and concluded that the MoE acted lawfully.[300] Similarly, in the proceedings brought by Springfield, the Court of Appeal ruled that, after a "thorough reading of all the motion papers, affidavits and

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297 Atuguba ER1, ¶ 119 (quoting Exh. CLA-74, *In the Matter of the Minerals and Mining Act, 2006 (Act 703) and Others v. Minister for Lands and Natural Resources Ex Parte*: Exton Cubic Group and Attorney General (2018) DLHC 4011, ¶ 113.

298 Rejoinder, ¶¶ 137 et seq.

299 First expert report of Prof. Ernest Kofi Abotsi of the University of Professional Studies Law School ("Abotsi ER1"), s. V.A.

300 Exh. C-130, Ruling on Eni and Vitol's application for Judicial Review, 21 Oct. 2021, p. 6.

annexures," it was "show[n] clearly that the Minister of Petroleum (Energy) has performed his duties under the Petroleum Act 919 and the Petroleum Regulations."[301]

307. Invoking the opinion of their legal expert, Prof. Abotsi, the Respondents argue that this Tribunal must respect these judicial decisions. Pursuant to Ghanaian law, a judicial decision about the lawfulness of an administrative act is final and binding, unless and until overturned by a higher instance, which this Tribunal is not.[302] The Tribunal therefore should respect these decisions, and should not countenance the Claimants' repeated attempts to evade them.

d. The MoE acted fairly, reasonably and transparently while the Claimants obstructed the unitisation process

308. The Respondents submit that, in imposing the Unitisation Directives, the MoE complied with all applicable rules of procedural and substantive fairness. In particular, it gave the Claimants multiple opportunities to provide detailed responses to Springfield's unitisation requests before beginning the unitisation process; has tried hard to get the Claimants and Springfield to collaborate; has shared an abundance of information and data with the Claimants; has carefully analysed the Claimants' evaluation of that information and data; has provided the Claimants with access to the highest levels of the Ghanaian government; has given the Claimants a plethora of opportunities to be heard; has consistently reiterated its desire for a joint appraisal of Afina and a redetermination of tract participation; and has helped the Claimants' progress with this and other interests in Ghana.[303]

309. The Respondents dispute that the MoE "pre-judged the issues," "was predisposed to proceed with the unitisation despite the technical case for unitisation not being made out," and was somehow biased in favour of Springfield.[304] The Claimants omit that the MoE did not grant Springfield's first two unitisation requests in March 2018 and August 2018. Instead, the MoE invited Springfield to present its findings to a technical team,[305] asked GNPC to investigate whether an accumulation of petroleum extended from

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301 Exh. R-51, Ruling of the Court of Appeals in Springfield Proceedings, 22 Feb. 2021, pp. 20-21.

302 Rejoinder, ¶¶ 148-150, citing Abotsi ER1, ¶¶ 89, 93.

303 Rejoinder, ¶ 153.

304 Rejoinder, ¶ 159, citing Reply, ¶¶ 201-202.

305 Exh. R-21, Letter from the Ministry to Springfield, 17 Apr. 2018; Exh. C-17, Letter from Springfield to the Ministry (27 Jan. 2020).

OCTP into WCTP-2,[306] evaluated the 2018 GNPC Report,[307] asked Eni to respond to Springfield's request,[308] and ultimately asked Springfield to drill a well to gather further information.[309]

310. What is more, contrary to the Claimants' allegations, the MoE issued the April Directive after carefully considering both parties' positions during more than two years after Springfield's first unitisation request.[310] Through the April Directive, the MoE directed the parties to begin the process leading to the unitisation "or otherwise".[311] It did so only after Springfield drilled the Afina-1X Well[312] and made a discovery,[313] after Springfield submitted to the MoE another unitisation request with supporting documentation and data;[314] after Eni was asked to respond to Springfield's request and to provide supporting documentation;[315] after Eni declined to provide any technical data;[316] after the Petroleum Commission and the MoE reviewed and analyzed Springfield's request;[317] and after the Petroleum Commission and the MoE concluded that an accumulation of petroleum extended beyond OCTP into WCTP-2.[318]

311. The Respondents oppose the Claimants' allegation that "they were never invited to comment on Springfield's presentation [of 11 March 2020], the assumptions in

306 Exh. R-22, Letter from GNPC to the Ministry, 5 June 2018.

307 Aryeetey WS1, ¶ 43.

308 Exh. C-81, Letter from the Ministry to Eni, 19 July 2018.

309 Exh. C-22, Writ of Summons issued by Springfield, 10 July 2020, ¶ 19; Exh. C-17, Letter from Springfield to the Ministry, 27 Jan. 2020, p. 1.

310 Exh. R-20, Letter from Springfield to the Ministry, 20 Mar. 2018; Exh. C-11, Letter from the Ministry to Eni and Springfield, 9 Apr. 2020.

311 Exh. C-11, Letter from the Ministry to Eni and Springfield, 9 Apr. 2020.

312 Exh. C-12, Notice of the Afina Discovery, 13 Nov. 2019; Exh. C-22, Writ of Summons issued by Springfield, 10 July 2020, ¶ 21.

313 Exh. C-12, Notice of the Afina Discovery, 13 Nov. 2019.

314 Exh. C-17, Letter from Springfield to the Ministry, 27 Jan. 2020, p. 2; Exh. C-90, Brief Technical Report on the Extension of Sankofa Cenomanian Reservoir into West Cape Three Points Block 2, Jan. 2020.

315 Exh. C-20, Letter from Petroleum Commission to the Ministry, 2 Apr. 2020, p. 1.

316 Exh. C-93, Letter from Eni to the Petroleum Commission, 26 Mar. 2020; Exh. C-20, Letter from Petroleum Commission to the Ministry, 2 Apr. 2020, p. 3.

317 Exh. C-20, Letter from Petroleum Commission to the Ministry, 2 Apr. 2020; Exh. C-11, Letter from the Ministry to Eni and Springfield, 9 Apr. 2020.

318 Exh. C-20, Letter from Petroleum Commission to the Ministry, 2 Apr. 2020 pp. 3-5; Exh. C-11, Letter from the Ministry to Eni and Springfield.

Springfield's model, or the conclusions which were reached."[319] After Springfield's March 2020 presentation, the Petroleum Commission "thought it expedient to give Eni an opportunity to respond to the claims of Springfield for unitisation," so the Petroleum Commission "engaged Eni via a video conference on the 23rd day of March, 2020 and followed up with a letter directing Eni to formally communicate its position on Springfield's claims with supporting documents."[320] Eni responded, summarily concluding that it was "premature at this stage for Springfield to request unitisation discussions" because Springfield had not yet appraised its discovery.[321]

312. According to the Respondents, the Claimants' reluctance to engage in substantive discussion is explained by the fact that, at that time, the Claimants already had sufficient internal information to know that the accumulation of petroleum extended from OCTP into WCTP-2.[322]

313. The Respondents further disagree with the Claimants' allegation that the MoE disregarded the advice it received from the Petroleum Commission. If anything, that advice confirmed the Respondents' position in this arbitration. Specifically, in the Respondents' submission, the advice:[323]

- Described that unitisation arises when there is a "single producing geological structure, reservoir or accumulation in which various parties have legitimate exploration and production rights over different Contract Areas."

- Concluded that its analyses of seismic amplitude signature and Pressure Volume Temperature (PVT) confirmed that "Springfield's Afina-1X discovery in the WCTP 2 Block is likely to extend into Eni's Sankofa OCTP Production Area".

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319 Rejoinder, ¶ 165, citing Reply, ¶ 122.

320 SoD, ¶ 111; Exh. C-20, Letter from Petroleum Commission to the Ministry, p. 3.

321 Exh. C-93, Letter from Eni to the Petroleum Commission.

322 Rejoinder, Section III.D, alleging that in internal documents dating back to 2016, Eni had acknowledged that "[b]ased on the technical evaluation, it was possible to confirm that the Sankofa East oil field has a westward down-dip extension in Block 2 (i.e., WCTP-2)." Exh. R-98, Authorizing Memorandum: "West Cape Three Points Block 2: New exploration initiative in offshore Ghana", 15 September 2016, p. 1.

323 Exh. C-20, Letter from Petroleum Commission to the Ministry, 2 April 2020, p. 2.

- Concluded that data from both the Afina-1X and OP-CAMP1 wells showed that "the pressure regimes of both wells were similar."

314. The Respondents challenge the Claimants' argument that the Minister misrepresented the Petroleum Commission's advice when he wrote in the April Directive that the Petroleum Commission had assessed that the Afina 1x Cenomanian discovery and the Sankofa Cenomanian accumulation were "one and the same".[324] For them, the Minister's statement is simply a less formal way of restating the Petroleum Commission's "considered opinion that it is likely that the Sankofa Cenomanian reservoir straddles WCTP2 and OCTP."[325]

315. Moreover, the Respondents argue that the Claimants obstructed the unitisation process throughout. They chose to ignore the April Directive, and foreclosed the possibility of cooperation when they presented an ultimatum that they refused to proceed with engagement unless the April Directive was suspended.[326] In addition, the Claimants stopped communicating with Springfield after the initiation of court proceedings,[327] despite the MoE extending the timelines of the April Directive to allow the parties more time to negotiate.[328] Eventually, when the Claimants' conduct left the MoE with no other option but to impose unitisation, the Claimants openly declined to comply with the October and November Directives.[329]

316. Finally, the Respondents assert that the MoE provided the Claimants with an abundance of data and information throughout the unitisation process, even though it was under no statutory obligation to do so.[330] The Claimants' complaint that they were not given access to certain calculations performed by GNPC for the 2020 GNPC Report, and the 20 February 2020 and 2 April 2020 correspondence between the MoE and the Petroleum Commission, is based on the false premise that the MoE was under an obligation to share internal deliberative documents.[331] Additionally, the Claimants

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324 Rejoinder, ¶ 172; Exh. C-11, Letter from the MoE to Eni and Springfield, 9 April 2020, p. 1.

325 Exh. C-20, Letter from Petroleum Commission to the Ministry, 2 April 2020, p. 5.

326 SoD, ¶¶ 121-134.

327 Exh. C-103, Email from Eni to Springfield, 23 July 2020.

328 Exh. C-27, Letter from the Ministry to Eni and Springfield, 27 July 2020; Exh. C-28, Letter from the Ministry to Eni and Springfield, 19 August 2020.

329 Exh. C-34, Letter from Eni and Vitol to the Ministry, 28 October 2020.

330 Rejoinder, ¶¶ 194 et seq.

331 Abotsi ER1, ¶¶ 55-60.

conveniently ignore that the MoE spent months trying to provide the Claimants with the Afina Data that the Claimants requested so they could provide an analysis to the MoE, but the Claimants initially rebuffed those attempts before finally allowing the MoE to provide the Afina Data to them.[332]

317. Overall, the Respondents conclude that the Claimants were given a fair opportunity to present their case in the unitisation proceedings, which the competent Ghanaian courts upheld as procedurally and substantively lawful. Consequently, the Claimants do not meet their heavy burden to show that the MoE failed to act in a fair, reasonable and transparent manner.[333]

e. The unitisation did not violate the Petroleum Agreement

318. The Respondents argue that the Claimants' assertions of violations of the Petroleum Agreement can be reduced to the claim that Ghana breached the stabilization clause contained in Article 26.2.[334] The evident weakness of this claim, according to the Respondents, is that there has been no relevant change in the law. As the Claimants acknowledge, the MoE's authority to unitise existed before the Petroleum Agreement came into effect.[335]

319. The Respondents dispute that Article 26.2 of the Petroleum Agreement, according to which it cannot be modified except upon the execution and delivery of a written agreement, means that the stabilization clause absolves the Claimants from complying with governmental acts, even where the State's authority to take these acts pre-existed the conclusion of the contract.[336]

320. According to the Respondents, such interpretation of the stabilization regime is contrary to its purpose, which is to protect a contractor from detrimental changes in the law, as the Claimants' own legal authorities confirm.[337] Instead of using the stabilization clause against changes in law, the Claimants seek to use it to opt-out of laws that they do not like.

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332 SoD, ¶¶ 169-180.

333 Rejoinder, ¶ 238.

334 Rejoinder, ¶ 239, citing Reply, ¶ 232.

335 Rejoinder, ¶ 239, citing Reply, ¶¶ 222, 229, 231.

336 Rejoinder, ¶ 242, citing Reply, ¶¶ 213, 217-18, 222, 238.

337 Exh. CLA-5, Peter Roberts (ed.), Oil & Gas Contracts: Principles and Practice (3rd edn. 2022), ¶ 20-07.

321. The Respondents submit that the Claimants have undertaken to comply with existing Ghanaian laws, *inter alia* in Article 26.1 of the Petroleum Agreement, which provides that the "Agreement and the relationship between the State and GNPC on one hand and Contractor on the other shall be governed by and construed in accordance with the laws of the Republic of Ghana."[338]

322. This choice of law is reinforced by Article 17.2, pursuant to which the Claimants "shall comply with all requirements of governing law, including applicable labour, health and safety and environmental laws and regulations in force from time to time."[339] For the Respondents, this provision is irreconcilable with the Claimants' interpretation of the stabilization regime contained in Article 26.2 of the Petroleum Agreement.

323. The Respondents also refer to Article 7.1(b) of the Petroleum Agreement, which stipulates that the Claimants "shall . . . take all practicable steps to ensure compliance with Section 3 of the Petroleum Law."[340] That section requires compliance among other things, with petroleum regulations, which includes those applying to unitisation.[341]

324. In the Respondents' submission, the Unitisation Directives were consistent with the Claimants' rights and obligations as they existed when the Petroleum Agreement was concluded. They note that the Claimants do not dispute that existing legal framework, but consider that such power was limited to voluntary unitisations, as opposed to compulsory ones. However, say the Respondents, the Petroleum Act and the Petroleum Regulations are clear that the MoE may order mandatory unitisation. In fact, in the OCTP Joint Operating Agreement, the Claimants expressly admitted that "unitisation" could be "imposed by any Ghanaian governmental authority empowered to do so."[342]

325. The Respondents add that Eni also explained in an internal email of 20 March 2020 that the "rules in Ghana for a unitisation process . . . are quite generic" and that the unitisation "process is handled by the MoE."[343] That email attached a presentation,

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338 Exh. C-1, Petroleum Agreement, 2 March 2006, Article 26.1.

339 Exh. C-1, Petroleum Agreement, 2 March 2006, Article 17.2.

340 Exh. C-1, Petroleum Agreement, 2 March 2006, Article 7.1(b).

341 Rejoinder, ¶ 249.

342 Rejoinder, ¶ 255, citing: Exh, R-5, OCTP Joint Operating Agreement, 30 September 2009, Article 6.10.1 ("The unanimous vote of the Parties shall be required for the following mattes: (a) unitisation (when not imposed by any Ghanaian governmental authority empowered to do so)").

343 Exh. R-119, Internal Eni emails, 20 March 2020.

which recognized that the "Minister may require the accumulation of petroleum to be developed and produced in a coordinated manner in order to ensure efficient petroleum activities".[344]

326. According to the Respondents, the Claimants have thereby recognized that the MoE's power to impose mandatory unitisation was part of the legal framework within which they acquired their contractual rights. The Minister used his authority in compliance with Ghanaian law and any applicable international principles and best practices, with the result that the claims under the Petroleum Agreement are without merit.

f. The Respondents are not estopped from implementing unitisation

327. The Respondents oppose the Claimants' estoppel argument and stress that it boils down to asserting that Respondents cannot "deny that the Claimants are entitled to develop the OCTP Project in accordance with their rights under the Petroleum Agreement."[345] This is, so the Respondents argue, simply a rehash of the Claimants' allegation that the MoE did not have the power to direct a compulsory unitisation.

328. According to the Respondents, the Petroleum Act and all applicable regulations which govern the OCTP contractual relationship explicitly recognize the MoE's authority to order a mandatory unitisation. The principle of estoppel cannot resuscitate the Claimants' argument that the Minister was not permitted to order unitisation.

329. Estoppel could arise when there are common assumptions or clear representations. However, the Claimants do not identify any representations that the Respondents made; instead they only cite unspecified "representations contained in the Petroleum Agreement" that allegedly "confirmed that the Claimants would be permitted to operate and receive value for their activities in OCTP in accordance with the terms of the Petroleum Agreement and the approved POD."[346] The Claimants make no assertion that the Respondents represented to them that the MoE's authority to unitise was limited to voluntary unitisation or that there was ever such a common assumption. In reality, according to the Respondents, the opposite is true, as both Parties understood that the Minister had the power to mandate unitisation.[347]

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344 Exh. R-119, Internal Eni emails, 20 March 2020, slide 1.

345 Rejoinder, ¶ 262, citing Reply, ¶ 245.

346 Citing Reply, ¶¶ 246-247.

347 Rejoinder, ¶ 263.

3. Analysis

330. The Parties' arguments primarily turn on whether the Unitisation Directives taken by the MoE were contrary to Ghanaian law. Since this Tribunal is constituted under the Petroleum Agreement, it must first assess whether and to what extent it is within its mandate to scrutinize the compliance of the Unitisation Directives with Ghanaian law (a). Considering that the lawfulness of the Unitisation Directives has been subject to litigation before Ghanaian courts, the next question is whether the findings of the Ghanaian courts have preclusive effects in this arbitration (b). Having resolved these threshold issues, the Tribunal will then analyse whether the Unitisation Directives comply with the applicable laws and regulations (c).

a. What is the scope of the Tribunal's mandate under the Petroleum Agreement?

331. This Tribunal is constituted pursuant to Article 24 of the Petroleum Agreement, which provides for resolution by arbitration of "any dispute […] in relation to or in connection with or arising out of any terms and conditions of [the Petroleum Agreement]".[348] The subject-matter scope of the Tribunal's mission is therefore limited to disputes that have a certain connection with the Petroleum Agreement.

332. The Claimants primarily argue that Ghana breached the applicable legal framework when imposing the Unitisation Directives. This being so, the Tribunal is mindful that the Unitisation Directives were taken by the competent State organ in the exercise of its sovereign capacity. It is equally mindful that it is neither a judicial nor administrative review body, nor an investment treaty tribunal scrutinizing the legality under international law of a State's conduct.

333. By contrast, the Tribunal is empowered to rule over a dispute "in relation to or in connection with or arising out of" the Petroleum Agreement. Thus, the Tribunal's mandate extends to determining whether Ghana breached the Petroleum Agreement by the manner in which it exercised its unitisation powers under Ghanaian law. In other words, it is only through the prism of a possible contract violation that the Tribunal may review the State's compliance with unitisation rules. Depending on the content of the Petroleum Agreement, compliance with Ghanaian unitisation rules may be a

348 Exh. C-1, Petroleum Agreement, 2 March 2006, Article 24.1..

preliminary question that needs to be answered to decide whether the Petroleum Agreement was breached or not.

334. Mindful of this limitation, the Tribunal asked the Claimants to clarify whether they sought to advance self-standing claims of violation of Ghanaian law, which the Claimants denied, stating that they claimed such breach "through Section 26(2) of the Petroleum Agreement."[349] This clarification is reflected in the amendments to their request for relief, where the Claimants no longer seek a declaration that "the First Respondent issued the Unitisation Directives without observing the requirements of Ghanaian law"[350] but instead base their claims entirely on alleged violations of the Petroleum Agreement.[351]

335. Therefore, the Tribunal must start with the Petroleum Agreement and assess whether the alleged violations of the Ghanaian regulations through unitisation are capable of constituting a breach of a Petroleum Agreement. The Petroleum Agreement contains no provisions that directly govern unitisation. That said, the stabilization clause in Article 26(2) aims at ensuring the stability of the contract terms and the existing regulatory framework. It is not controversial that the unitisation resulted in an alteration of key terms of the Petroleum Agreement, most importantly the distribution of the gross production of the crude oil under Article 10. Consequently, the unitisation potentially engages the application of Article 26(2).

336. The following two prongs of the stabilization regime contained in Article 26(2) are potentially relevant:

- **The Freezing Clause** aims at stabilizing the contractual terms and the applicable legal framework in the following terms: *"As of the Effective Date of this Agreement and throughout its term, the State guarantees Contractor* ***the stability of the terms and conditions*** *of this Agreement* ***as well as the fiscal and contractual framework*** *hereof specifically including those terms and conditions and that framework that are based upon or subject to the provisions of the laws and regulations of Ghana (and any interpretations thereof) including, without limitation, the Petroleum Income Tax Law, the*

[349] Transcript, Day 7, 164:21-165:6.

[350] Reply, ¶ 405.

[351] Claimants' Reply PHB, ¶ 104.

Petroleum Law, the GNPC Law and those other laws, regulations and decrees that are applicable thereto".[352]

- **The Intangibility Clause** seeks to prevent the impairment or unilateral alteration of the contractual terms and reads in pertinent part as follows: *"The State, its departments and agencies, shall support this Agreement and shall take no action which prevents or impedes the due exercise and performance of rights and obligations of the Parties hereunder [...] This Agreements and the rights and obligations specified herein may not be modified, amended, altered or supplemented except upon the execution and delivery of a written agreement executed by the Parties. Any legislative or* ***administrative act*** *of the State or any of its agencies or subdivisions* ***which purports to vary any such right*** *or obligation shall, to the extent sought to be applied to this Agreement,* ***constitute a breach of this Agreement*** *by the State."*[353]

337. The Tribunal considers that the Unitisation Directives potentially fall under the Intangibility Clause rather than the Freezing Clause of Article 26(2) of the Petroleum Agreement. While there appears to be some overlap between the two clauses, the Intangibility Clause applies to any "administrative act" that purports to vary any right or obligation under the Petroleum Agreement. By contrast, the language of the Freezing Clause focuses primarily on guaranteeing the stability of the applicable contractual and legal framework, rather that safeguarding against a (mis)application of such framework.

338. The unitisation process consisted precisely of administrative acts, most importantly the Unitisation Directives, which purported to vary key terms of the Petroleum Agreement. The Parties' dispute in respect of the unitisation turns chiefly on the manner in which Ghana applied the existing legislative framework governing unitisation, rather than on an alteration of such framework. These elements confirm that the unitisation must be reviewed in light of the Intangibility rather than the Freezing Clause.

339. That being so, an isolated reading of the Intangibility Clause suggests that any administrative act which varies the contractual rights of the parties would automatically "constitute a breach of [the Petroleum Agreement]." This reading would produce a far reaching result, namely that the State would be prevented from lawfully enforcing its

[352] Exh. C-1, Petroleum Agreement, 2 March 2006, Article 26.2 (emphasis added).

[353] Exh. C-1, Petroleum Agreement, 2 March 2006, Article 26.2 (emphasis added).

existing regulations if such enforcement were to result in an alteration of the rights and obligations under the Petroleum Agreement. If such an approach is adopted, a unitisation carried out lawfully would be contrary to the Petroleum Agreement, by virtue of the sole fact that it changes the terms of the Petroleum Agreement.

340. This reading would create a regime of strict liability that, in the Tribunal's opinion, was not intended by the parties to the Petroleum Agreement. That becomes clear when the Intangibility Clause is read together with other clauses of the Petroleum Agreement, which subject the Parties' contractual rights and obligations to the applicable legal framework. The following contract provisions corroborate the view that the parties did not intend to bar the State from lawfully applying the existing regulatory framework:

- Article 7.1(b) of the Petroleum Agreement provides that the Claimants "shall . . . take all practicable steps to ensure compliance with Section 3 of the Petroleum Law."[354] Section 3 of the "Petroleum Law" requires compliance with, among other things, petroleum regulations issued by the State, which include the regulations that apply to unitisation;

- Article 17.2 states that the Claimants "shall comply with all requirements of governing law […] and regulations in force from time to time;"[355]

- Article 26.1 contains the general choice of law clause, according to which the "Agreement and the relationship between the State and GNPC on one hand and Contractor on the other shall be governed by and construed in accordance with the laws of the Republic of Ghana consistent with such rules of international law as may be applicable, including rules and principles as have been applied by international tribunals."[356]

341. It follows that when they entered into the Petroleum Agreement, the Claimants agreed to be subjected to the lawful application of Ghanaian laws and regulations. Thus, while the Intangibility Clause potentially captures any administrative act that varies the terms of the Petroleum Agreement, an administrative act that lawfully enforces existing regulations would not be considered a variation of the terms of the Petroleum

354 Exh. C-1, Petroleum Agreement, 2 March 2006, Article 7.1(b).

355 Exh. C-1, Petroleum Agreement, 2 March 2006, Article17.2.

356 Exh. C-1, Petroleum Agreement, 2 March 2006, Article 26.1.

Agreement, given that these terms are themselves in any event subject to the existing laws and regulations in the first place.

342. Once the Intangibility Clause is read in its context, it must be understood to apply to administrative acts that vary the contractual rights in contravention of the applicable Ghanaian laws and regulations, which are consistent with any applicable rules and principles of international law.

343. Thus, the Tribunal's jurisdiction to resolve disputes under the Petroleum Agreement and hence to rule on potential breach of contract obligations, including those embedded in Article 26(2) implies the mandate to scrutinize whether Ghana, i.e. the First Respondent, complied with Ghanaian laws and regulations when carrying out the unitisation. As mentioned previously, the issue of whether the MoE acted lawfully in imposing the unitisation is a preliminary question that the Tribunal must answer to discharge its duty to assess whether a potential violation of Article 26(2) of the Petroleum Agreement occurred.

344. The Claimants also request a declaration that GNPC, i.e., the Second Respondent, breached the Petroleum Agreement by aiding the First Respondent with the wrongful unitisation. However, the language of Article 26(2) of the Petroleum Agreement only imposes stabilization obligations on the "State", namely on the First Respondent. Failing a showing of a proper legal basis on which the Tribunal would be empowered to scrutinize the alleged assistance given by the Second Respondent to the First Respondent, the Tribunal will focus its analysis on the conduct of the First Respondent.

b. Do the Ghanaian judicial decisions have preclusive effect?

345. As described in the fact section, the Unitisation Directives have given rise to two sets of judicial proceedings before the Ghanaian courts. First, Springfield initiated proceedings against the Claimants to compel them to comply with the Unitisation Directives.[357] The Claimants' request to strike out Springfield's claim was dismissed by the Court of Appeal.[358] Second, the Claimants initiated judicial review proceedings contesting the validity of the Unitisation Directives under Ghanaian law.[359] On 21 October 2021, the Ghanaian High Court dismissed the Claimants' petition for judicial

357 Exh. C-22, Writ of Summons issued by Springfield, 10 July 2020.

358 Exh. R-51, Ruling of the Court of Appeal, 22 February 2021.

359 Exh. C-48, Originating Notice of Motion for Judicial Review, 12 April 2021.

review.[360] As of the latest submissions of the Parties, both proceedings are under appeal and pending before the competent Ghanaian courts.[361]

346. The question arises whether the Ghanaian court judgments in the judicial review and Springfield proceedings carry preclusive effects, such as *res judicata* effect, with respect to this Tribunal's decision.

347. This arbitration is seated in Sweden and is governed by Swedish arbitration law as the *lex arbitri*.[362] Under Swedish law, issues of preclusion, such as *res judicata* and *lis pendens*, are characterized as matters of procedure rather than substance.[363] Therefore, when assessing potential preclusive effects of the Ghanaian judgments in this arbitration, the Tribunal must primarily apply Swedish law.

348. At the same time, the Tribunal is mindful that this is an international arbitration with links to multiple jurisdictions and participants from diverse legal traditions. Therefore, while primarily applying the *lex arbitri*, the Tribunal will also take into account relevant transnational principles, such as those contained in the International Law Association Report on *Res Judicata* and Arbitration (the "ILA Report") to which both Parties have referred.[364]

349. For the avoidance of doubt, it must be specified that, as the Respondents observe, whether a Ghanaian judgment has become final and binding is a question governed by Ghanaian law. However, the fact that a judgment may have become final and binding in the State of its issuance pursuant to the law of the State does not dispose of the question of whether and to what extent such judgment should be given preclusive effect

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360 Exh. C-130, Ruling on Eni and Vitol's application for Judicial Review,21 October 2021.

361 Claimants' PHB, ¶ 464.

362 See Exh. CLA-106, F. De Ly and A. Sheppard, *International Law Association Interim Report on Res Judicata and Arbitration* (Berlin: International Law Association Conference on International Commercial Arbitration, 2004), , p. 65.

363 Exh. CLA-107, L. Heuman, *Arbitration law of Sweden: Practice and Procedure* (New York: Juris Publishing, 2003), pp. 672–673.

364 Exh. RLA-141, F. de Ly & A. Sheppard, *ILA Recommendations on Lis Pendens and Res Judicata and Arbitration*, 25 Arb. Int'l 1 (2009),; Exh. CLA-106, F. De Ly and A. Sheppard, *International Law Association Interim Report on Res Judicata and Arbitration* (Berlin: International Law Association Conference on International Commercial Arbitration, 2004), p. 65; Exh. RLA-140, De Ly and A. Sheppard, *ILA Final Report on Res Judicata and Arbitration*, 25 Arb. Intl 1 (2009).

in an international arbitration.[365] This latter question, when it is characterized as a question of procedure, is governed by the law of the seat of the arbitration.

350. Swedish law recognizes the principle of *res judicata*, provided that the Parties to two sets of proceedings are identical and the proceedings concern the same subject-matter.[366] Similar requirements emerge from the transnational principles elaborated by the ILA Report.[367]

351. The Springfield proceedings were instituted by Springfield, which is not a party in this arbitration.[368] In addition, the subject matter of the Springfield proceedings is the Claimants' alleged non-compliance with the Unitisation Directives, which is distinct from the contractual dispute of which this Tribunal is seized. Thus, the identity test is not satisfied in respect of the Springfield proceedings, with the consequence that a judgment issued in those separate proceedings cannot not have preclusive effects with respect to the distinct claims brought in this arbitration.

352. As for the judicial review proceedings, their subject matter is the Claimants' rights under Ghanaian constitutional and administrative law that were allegedly violated by the Unitisation Directives.[369] By contrast, the present arbitration addresses the alleged breach of the contractually agreed stabilization regime. Therefore, the subject matter of the two proceedings are not the same and thus the Ghanaian court decisions in the judicial review proceedings do not have preclusive effects in this arbitration.

353. This conclusion is not a result of a formalistic approach to the principle of *res judicata* but rather the recognition that the judicial review proceedings are different from this arbitration in material respects. The Tribunal agrees with the Respondents' statement that "policy concerns of avoiding conflicting judgments and protecting parties from

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365 The Tribunal notes that Ghanaian judgments are not automatically recognized in Sweden and, as far as the record shows, no such recognition has ever been sought. See, Exh. CLA-113, Supreme Court of Sweden, NJA 2019, 13 June 2019, ¶ 11.

366 Exh. CLA-108, K. Hobér, *International Commercial Arbitration in Sweden*, 2nd edition (Oxford University Press, 2021), ¶¶7.105, 7.110-7.112.

367 F. de Ly & A. Sheppard, ILA Recommendations on Lis Pendens and Res Judicata and Arbitration, 25 Arb. Int'l 1 (2009), RLA-141; Exh. CLA-106, F. De Ly and A. Sheppard, *International Law Association Interim Report on Res Judicata and Arbitration* (Berlin: International Law Association Conference on International Commercial Arbitration, 2004), p. 65; Exh. RLA-140, De Ly and A. Sheppard, *ILA Final Report on Res Judicata and Arbitration*, 25 Arb. Intl 1 (2009).

368 Exh. C-22, Writ of Summons issued by Springfield, 10 July 2020.

369 Exh. C-48, Motion for Judicial Review, 14 April 2021; Exh. R-56, Applicants' Statement of Case in Judicial Review Proceedings, 26 April 2021.

oppressive litigation tactics"[370] provide the underlying rationale of the transnational principles of preclusion and *res judicata*. No such compelling concerns arise here. The Claimants' submission of their claims arising from the Petroleum Agreement to arbitration according to the arbitration agreement embodied in that contract can hardly be characterized as oppressive litigation tactics. Additionally, in this arbitration, the Tribunal will review the unitisation measures as a preliminary step in the context of its assessment of the existence of a breach of the Petroleum Agreement. Therefore, there is no risk that the operative part of the award will be in conflict with judgments of the Ghanaian courts.

354. That being so, the Tribunal notes that the Court of Appeal in the judicial review proceedings held that the MoE had not breached Section 34(1) of the Petroleum Act.[371] One might argue that this finding could give rise to preclusive effects known primarily to common law jurisdictions as issue estoppel. Yet, there is no indication in the record that issue estoppel forms part of Swedish law, which is a civil law jurisdiction and Respondents have not pleaded otherwise. Therefore, the Tribunal concludes that the separate and distinct Ghanaian judicial decisions in the Springfield and judicial review proceedings cannot have preclusive effects in this arbitration.

c. Did the Unitisation Directives comply with the applicable regulations?

355. It is common ground that, under Ghanaian law, unitisation is primarily governed by Section 34 of the Petroleum Act, which is implemented by Regulation 50 of the Petroleum Regulations.

356. Section 34(1) of the Petroleum Act empowers the MoE, in consultation with the Petroleum Commission, to direct two or more contractors to develop an accumulation of petroleum as a single unit, where such accumulation extends beyond the boundaries of one contract area into one or more other contract areas:

> Where an accumulation of petroleum extends beyond the boundaries of one contract area into one or more other contract areas, the Minister in consultation with the Commission may, for the purpose of ensuring optimum recovery of petroleum from the accumulation of petroleum, direct the relevant contractors, to enter into an agreement to develop and produce the accumulation of petroleum as a single unit.[372]

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370 Respondents' Reply PHB, ¶ 34.

371 Exh. C-130, Ruling on Eni and Vitol's application for Judicial Review, 21 October 2021, ¶ vii.

372 Exh. C-16, Petroleum Act, 2016, Section 34.

357. Section 34 of the Petroleum Act is to be read in light of the principles set out in Section 4, pursuant to which "[t]he management of petroleum resources by the Republic of Ghana shall be conducted in accordance with the principles of good governance, including transparency and accountability and the object of this Act". In turn, Section 2 of the Petroleum Act, stipulates that the object of the Act is to "ensure safe, secure, sustainable and efficient petroleum activities in order to achieve optimal long-term petroleum resource exploitation and utilisation for the benefit and welfare of the people of Ghana."

358. Regulation 50 of the Petroleum Regulations gives effect to Section 34 of the Petroleum Act by prescribing the modalities of the unitisation agreement that the contractors must conclude at the direction of the MoE. Importantly, Subsections 4 and 6 of Regulation 50 provide that, after the completion of the appraisal of the petroleum accumulation, the contractors must submit a draft UUOA to the MoE, failing which the MoE can stipulate the terms and conditions for unitisation:

> (4) The relevant contractors shall submit to the Minister a draft unitisation and unit operating agreement or an agreement to coordinate and develop separate petroleum accumulations based on the model agreement described in subregulation (1) within six months after the finalisation of appraisal of the petroleum accumulation.
>
> […]
>
> (6) Where the relevant contractors do not submit a unitisation or a coordination agreement pursuant to subregulation (5), the Minister may stipulate the terms and conditions for the unitisation or coordination of petroleum resources in the area and may seek the opinion of an independent third-party expert at the cost of the contractors.[373]

359. Having reviewed the Parties' submissions and the evidence on record, the Tribunal comes to the conclusion that the unitisation measures taken by the MoE were not implemented in a manner that is consistent with the applicable legal framework in several respects. While the Parties have made arguments on multiple procedural and substantive aspects of the unitisation measures, the Tribunal concentrates its analysis on the relevant shortcomings, acknowledging that it owes a degree of deference to the competent organs of Ghana and must not sit in judgment of each and every administrative irregularity. Specifically, the Tribunal focuses its analysis on the following three relevant shortcomings of the unitisation measures, namely (i) the statutory

373 Exh. C-66, Petroleum Regulations, 2018, Regulation 50.

unitisation trigger was not established, (ii) the imposition of the unitisation terms was unlawful, and (iii) the determination of the tract participation was arbitrary.

i. The statutory trigger for commencing unitisation was not established

360. Pursuant to Section 34(1) of the Petroleum Act, the MoE's discretion to direct unitisation arises where "an accumulation of petroleum extends beyond the boundaries of one contract area into one or more other contract areas". Thus, for Section 34(1) to be triggered, there must exist a single accumulation of petroleum straddling two or more contract areas. The Respondents acknowledge that "[t]he trigger for unitisation pursuant to international practice, and Ghanaian law, is the discovery of a hydrocarbon accumulation that straddles across two or more contract areas".[374]

361. The MoE began the unitisation process with the April Directive, in which it invoked Section 34 of the Petroleum Act and Regulation 50(6) of the Petroleum Regulations and directed Springfield and Eni to "furnish the Ministry with a draft unitisation and unit operating agreement within 120 days".[375] As the basis for its decision, the MoE relied on three sources: (i) the 2018 GNPC Report, (ii) the Petroleum Commission's letter of 2 April 2020, and (iii) the Afina-1X Well data which, according to the MoE, provided evidence "that the two reservoirs are one and the same".[376]

362. Importantly, the record shows that the MoE had not made any of the sources that it cited as the basis for its decision available to the Claimants prior to issuing the April Directive. In fact, it refused Eni's repeated requests for the underlying documents even after the April Directive.[377] In contrast, Springfield had access to the 2018 GNPC Report at least as early as 14 August 2018, as it referred to that report in its unitisation request.[378] As a result, the Claimants did not have a meaningful opportunity to consider and contest the MoE's assertion that the available data demonstrated a straddling accumulation.

363. Be that as it may, none of these sources invoked by the MoE established the existence of a straddling accumulation, which could have served as a trigger for the invocation of

374 Respondents' Opening Presentation, Slide 59.

375 Exh. C-11, Letter from the MoE to Eni and Springfield (April Directive), 9 April 2020.

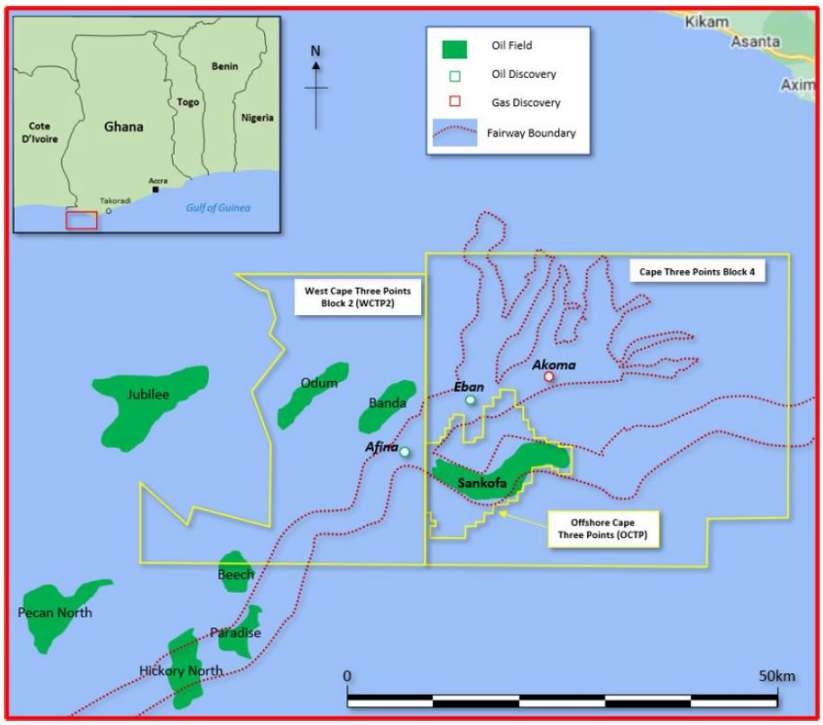
376 Exh. C-11, Letter from the MoE to Eni and Springfield (April Directive), 9 April 2020.

377 Exh. C-19, Letter from the MoE to Eni, 18 May 2020; Exh. C-18, Letter from Eni to the MoE, 11 May 2020; Exh. C-34, Letter from Eni and Vitol to the MoE, 28 October 2020, p. 5.

378 Exh. R-23, Letter from Springfield to the MoE, 14 August 2018, p. 1.

the MoE's unitisation powers under Section 34 of the Petroleum Act, let alone for the direction to provide a draft UUOA under Regulation 50(6) of the Petroleum Regulations.

364. First, the 2018 GNPC Report found that "[s]eismic amplitude expression of a cenomanian turbidite channel **fairway** straddles the boundary between CTP Block 4 and WCTP Block".[379] A straddling fairway is, however, different from a straddling accumulation. Worthington's treatise on unitisation, to which both Parties and their experts refer, defines "accumulation" as "[a]n inseparable volume (of petroleum) contained within and distributed throughout host rocks in the form of a reservoir".[380] An accumulation is also sometimes referred to as a reservoir or pool.[381] It is, however, distinct from the term "fairway", sometimes also called a channel system, which denotes a regional stratigraphic structure within which multiple oil fields can be contained. Each oil field may then contain multiple accumulations. Accumulations present in the same fairway are likely to show similar geological properties.[382] The relationship between fairways and fields is clear from the following map:[383]



379 Exh. R-22, the 2018 GNPC Report, p.13 (emphasis added).

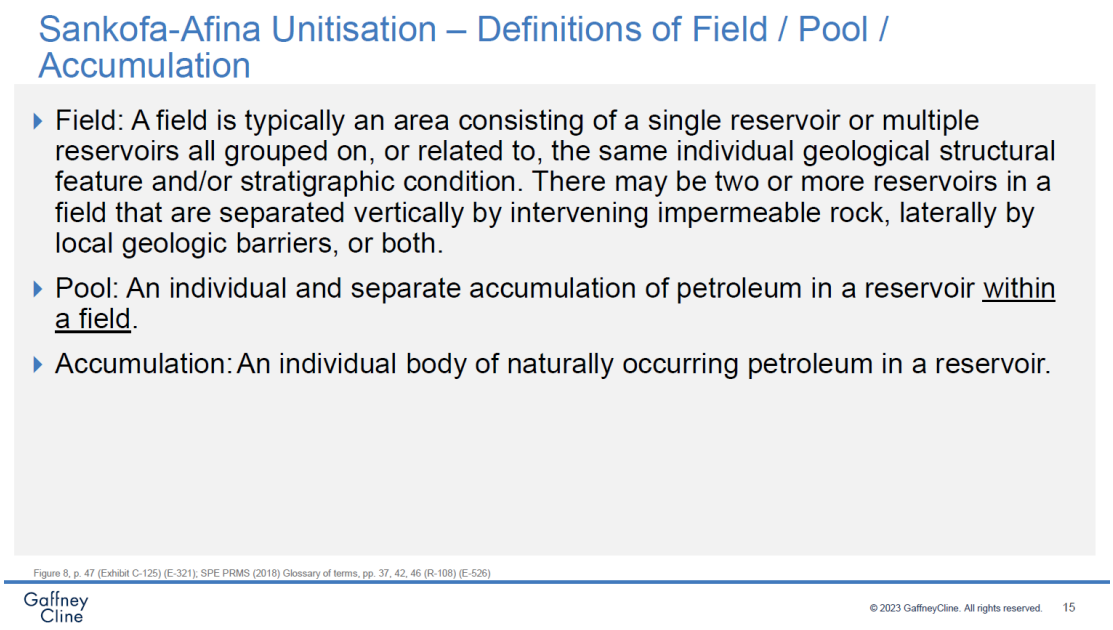
380 Exh. C-158, Worthington, The Law on Petroleum Unitisation (Definitions).

381 Respondent's Expert Presentation, Wright, Slide 15.

382 Wilks ER2, Glossary, Fireway.

383 Claimant's Demonstrative, CD1.

365. The 2018 GNPC Report referred to a straddling "fairway". It did not establish that the Sankofa accumulation straddled into the Afina contract area. The April Directive thus misread the GNPC finding, when it stated that "GNPC […] opined that, based on interpretation of seismic data, the Sankofa field extended into the WCTP-2 Contract Area."[384] In any event, a finding of a straddling field would also be insufficient to show a straddling accumulation, as multiple accumulations can be contained in a single field. This is confirmed by the Respondents' expert:[385]



366. That the available data was insufficient to establish a straddling accumulation is supported by a contemporaneous Competent Person's Report commissioned by Springfield and prepared by GCA, whose Dr. Wright also acts as the Respondents' expert in this arbitration. The report expressly acknowledged that there was "insufficient evidence of the continuity of the pool".[386]

367. Second, the Petroleum Commission's letter on which the April Directive relied did not provide a basis for the MoE's conclusion that the Sankofa reservoir extended into the WCTP-2 Contract Area. While the Petroleum Commission opined that "it is likely that the Sankofa Cenomanian reservoir straddles WCTP2 and OCTP", it advised that, in order to "meet the condition precedent of Section 34(1) of Act 919, Regulation 50", the MoE should direct Springfield and Eni to "hold pre-unitisation discussions, […]

384 Exh. C-11, April Directive, 9 April 2020, pp. 1-2 (emphasis added).

385 Respondents' Expert Presentation, Wright, Slide 15.

386 Exh. C-185, Competent Person's Report by GCA, October 2019.

exchange data […] to establish if the structure is a common reservoir". Only "upon receipt of the outcomes of the engagements of the parties" would the MoE be "able to take a decision on whether there is a case for the parties to be ordered to execute a unitisation agreement".[387]

368. Third, the MoE did not explain how the Afina 1X Well data on which it relied evidenced that the Afina and Sankofa "reservoirs are one and the same" as stated by the MoE in the April Directive. No comprehensive analysis of such data appears to have been cited, much less made available to the parties by the MoE.

369. Even the later analysis that the GNPC conducted in the 2020 GNPC Report, which could not possibly have informed the April Directive, only concluded that "Sankofa channel complex is the same complex intersected by Afina 1X well" and that Afina-1X Cenomanian Reservoir appears to be likely in static communication with the updip Sankofa Cenomanian reservoir".[388] The Respondents' expert in this arbitration has repeated similar conclusions.[389]

370. Even if this or similar analyses of the Afina 1X Well had been available to the MoE at the time of the issuance of the April Directive, of which there is no evidence, it would still not be sufficient to trigger the MoE's powers to direct the Parties to begin the unitisation process and provide a draft UUOA. Both the 2020 GNPC Report and the Dr Wright's report in this arbitration confirm that the Afina Discovery and the Sankofa Field are part of the same stratigraphic fairway.[390]

371. As explained above, more than one field and an even higher number of accumulations can be contained within the same stratigraphic fairway. Thus, the finding that there exists a straddling fairway between the Afina and Sankofa areas does not, in and of itself, establish that the accumulations are "one and the same" as stated by the April Directive.

372. As for the Respondents' *ex post* assessment of the Afina 1X Well data that "the Afina Discovery and the Sankofa Field are in likely static pressure communication"[391], the

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387 Exh. C-20, Petroleum Commission's Letter to the MoE, 2 April 2020 (emphasis added).

388 Exh. C-32, 2020 GNPC Report, 6 October 2020, Conclusions.

389 Wright ER1, ¶¶ 7 and 9.

390 Exh. C-32, 2020 GNPC Report, 6 October 2020, Conclusions; Wright ER1, ¶¶ 7 and 9.

391 Wright ER1, ¶ 9.

Tribunal is not persuaded that this establishes that there is a single straddling accumulation within the meaning of Section 34(1) of the Petroleum Act.

373. As a matter of chronology, these *ex post* assessments by GNPC and the Respondents' expert in this arbitration referring to static communication could not have informed the April Directive. In any event, those assessments only refer to a likelihood of existence of static communication, which stands in contrast with Section 34(1) of the Petroleum Act, which does not refer to a likelihood but requires the existence of a straddling accumulation.

374. Further, and in any event, static communication refers to pressure communication that may exist between petroleum accumulations over long-term geological periods. When two accumulations are in static communication, a depletion in one (e.g. due to exploitation) may affect the pressure in the other within a geological period and not necessarily within a period that is economically relevant.

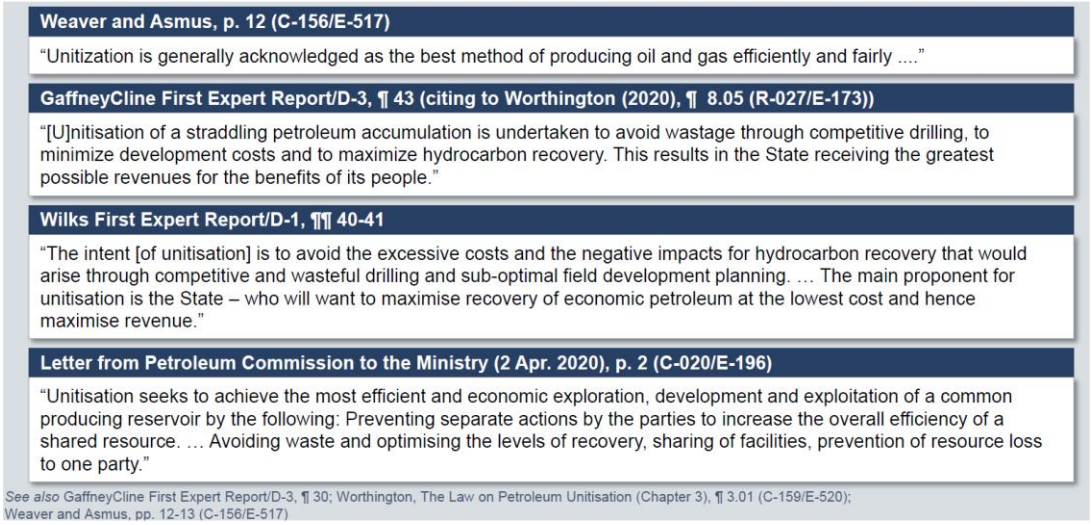
375. It requires no long explanation to understand that, when the Ghanaian legislator vested the MoE with the power to unitise "an accumulation of petroleum [that] extends beyond the boundaries of one contract area into one or more other contract areas", it anticipated concrete economic consequences rather than long-term geological effects. This is confirmed by a textual, teleological and contextual interpretation of Section 34(1).

376. Starting with the text of Section 34(1), it uses the term "accumulation", which Worthington's textbook defines as "[a]n **inseparable** volume (of petroleum) contained within and distributed throughout host rocks in the form of a **reservoir**".[392] In turn, the textbook defines the term "reservoir" as "[t]hat part of a host rock that stores **movable** petroleum in its pores and other interstices in sufficient quantities to be of potential economic interest".[393] It follows that the term "accumulation" used in Section 34(1) denotes a movable volume of petroleum contained in a host rock. For petroleum volumes to be considered part of a single accumulation, they must therefore be movable within a single reservoir, which implies dynamic, rather than static communication.

392 Exh. C-158, Worthington, The Law on Petroleum Unitisation (Definitions).

393 Exh. C-158, Worthington, The Law on Petroleum Unitisation (Definitions).

377. As for the teleological interpretation, a unitisation aims at fostering an efficient development of hydrocarbon resources, by avoiding unnecessary competitive drilling and consequent waste of resources. The Respondents themselves aptly summarized various sources in the record that elucidate on the objectives of unitisation:[394]



378. The MoE's power to unitise must be read in light of the overarching objective of optimum recovery of petroleum, which is enshrined in the general provisions of the Petroleum Act.[395] In light of this objective, the primary aim of a unitisation is to avoid the wastage caused by competitive drilling. This objective would only make sense if drilling activity in one contract area were to be capable of producing effects in the other contract area in an economically significant, rather than in a geological timeframe.

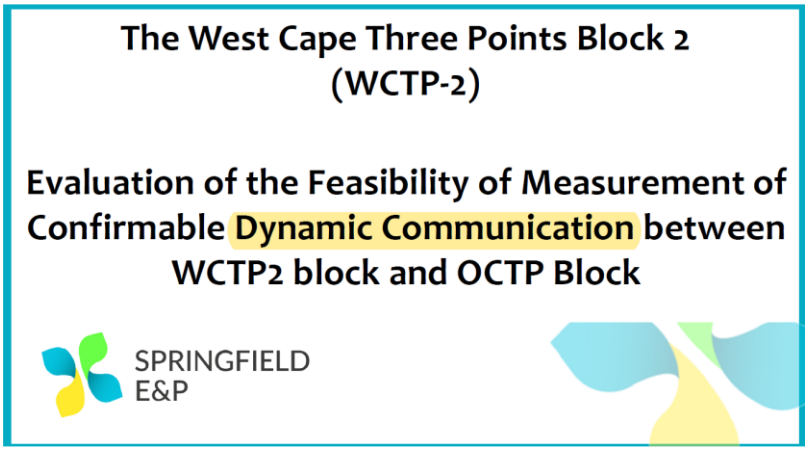
379. Indeed, in the unitisation request, Springfield advanced as the main justification of its request that "if the fields are not unitised, in the shortest possible time, Eni may capture part of our hydrocarbons in the area as they are already in production".[396] This justification only makes sense if there exists a dynamic as opposed to static communication within the relevant reservoir. It is thus no surprise that, in the section of the unitisation request titled "our commitment", Springfield represented to the MoE as follows: "Hon. Minister, we are currently preparing to drill a well/s to establish dynamic

394 Respondents' Opening Presentation at the Hearing, Slide 45.

395 Exh. C-16, Petroleum Act, 2016, Section 4: "The management of petroleum resources by the Republic of Ghana shall be conducted in accordance with the principles of good governance, including transparency and accountability and the object of this Act."

396 Exh. R-23, Letter from Springfield to the Ministry, 14 August 2018.

communication".[397] Springfield repeated its aim to establish dynamic communication in its presentation of 11 March 2020:[398]



380. While Springfield sought to be allowed to establish dynamic communication only after obtaining a unitisation order, Section 34 does not provide a basis for such reverse sequence. Instead, the language of the provision is clear that the MoE's power to unitise arises when "an accumulation of petroleum extends beyond the boundaries of one contract area into one or more other contract areas". This entails that before the MoE takes unitisation measures, it must have assessed and determined the existence (as opposed to a mere likelihood or probability of existence) of a straddling accumulation with movable petroleum, i.e. petroleum in dynamic communication.

381. A contextual interpretation of Section 34(1) confirms that the invocation of the unitisation powers requires the existence of a single reservoir in dynamic communication. This is evident from the structure of Section 34. While Section 34(1) provides for unitisation of a single accumulation, Section 34(3) governs the possibility of a coordinated development, which is a less invasive measure that the MoE may impose on contractors. Pursuant to Section 34(3) where "two or more accumulations of petroleum are in proximity to one another" the MoE may require the relevant contractors to coordinate their development and production activities. Thus, the legislator has envisaged a possibility of less invasive intervention in cases where efficiency requires certain coordination, but there exists no single accumulation, which would warrant unitisation.

397 Exh. R-23, Letter from Springfield to the Ministry, 14 August 2018.

398 Exh. C-175, Presentations by Springfield, 11 March 2020.

382. What is more, even Springfield's unitisation request did not call for the MoE to direct the parties to enter into a UUOA. Instead, it requested the engagement of an independent consultant and a direction by the MoE to the parties to enter into an "agreement that would contain conditions (including the mandatory drilling by Springfield to establish dynamic communication) and timelines to avert unnecessary delays, in the event the independent consultant establishes that the fields straddle".[399] This is more akin to a PUA, rather than a UUOA, which the MoE ordered the Parties to negotiate in the April Directive.

383. It is up for a debate whether the MoE had the power to direct the parties to enter into a PUA at all, since there appears to be no corresponding provision in the applicable regulations. This is, however, irrelevant, as the MoE invoked its powers under Section 34 of the Petroleum Act and Regulation 50(6) of the Petroleum Regulations and directed the parties to come up with a draft UUOA.

384. On the basis of the evidence, the Tribunal concludes that the MoE did not determine the existence of a single accumulation within the meaning of Section 34(1) of the Petroleum Act prior to commencing the process of unitisation. Hence, it finds that the MoE's decision to require Eni and Springfield to "furnish the Ministry with a draft unitisation and unit operating agreement" was made prematurely, at a time when the MoE's discretion under Section 34 of the Petroleum Agreement had not been triggered.

ii. The imposition of the unitisation terms was wrongful

385. As described in the fact section above, following the April Directive, the Claimants and Eni engaged in discussions on the exchange of data. They did not, however, reach an agreement on the principles for data exchange and did not meet the time limit for furnishing the draft UUOA imposed by the April Directive. Consequently, the MoE issued the October Directive in which it invoked Regulation 50(6) of the Petroleum Regulations and, as noted above, imposed unitisation terms as follows:

> (i) the MoE declared the unitisation of the rights and interests of the parties to the Petroleum Agreement and the WCTP2 Petroleum;
>
> (ii) based on the 2020 GNPC Report, the initial tract participation in the unitised Afina field and the Sankofa field, i.e. the participation of each of the parties

399 Exh. R-23, Letter from Springfield to the Ministry, 14 August 2018, "Our request".

involved, was to be 54.545% for the WCTP2 parties and 45.455% for the OCTP parties;

(iii) all produced petroleum, as well as all expenditures, were to be allocated between the parties in accordance to their tract participation, with retroactive effect;

(iv) Eni was designated as operator of the area; and

(v) the parties were to undertake a redetermination exercise within 18 months.[400]

386. The Claimants requested the MoE to withdraw the October Directive on the grounds that the relevant regulations had not been followed, as there had been no appraisal of the Afina Discovery and the Claimants had not received data showing that the two areas were ripe for unitisation.[401] The MoE then issued the November Directive rejecting the Claimants' request and stating that the "compliance with the terms and conditions imposed by [the October Directive] is non-negotiable".[402]

387. There were several procedural and substantive shortcomings to the MoE's decision to impose the unitisation terms through the October and November Directives.

388. First, the parties' alleged failure to comply with the April Directive did not serve as a valid basis for the MoE's decision to impose unitisation by the October and November Directives. The Tribunal notes that the 120-day time limit that the MoE prescribed in the April Directive for the provision of a draft UUOA was inadequate and contrary to the applicable regulations. Regulation 50(4) requires that the MoE give at least six months for the provision of a draft UUOA.[403] The Respondents' expert Dr. Wright admitted that "120 days is a short time period for the execution of a UUOA in my experience" and added that he found it "a shorter duration than expected and not aligned in that way with industry best practice".[404]

400 Exh. C-31, Letter from the MoE to Eni and Springfield, 14 October 2020.

401 Exh. C-34, Letter from the Claimants to the MoE, 28 October 2020, ¶¶ 2-4.

402 Exh. C-36, Letter from the MoE to Eni, 6 November 2020.

403 Exh. C-66, Petroleum Regulations, 2018.

404 Transcript, Day 5, 147:5-148:16.

389. It follows that, apart from lacking the substantive basis, the April Directive imposed a time limit for the provision of a draft UUOA that was improper. Thus, the alleged non-compliance with that directive could not justify the imposition of the unitisation terms by the October and November Directives.

390. Second, and in any event, the MoE's decision to react to the Claimants' alleged failure to cooperate with Springfield in negotiating a draft UUOA by directly imposing unitisation terms was not in conformity with the applicable legal framework. As explained in the preceding section, the MoE's discretion to impose unitisation measures only arises where the existence of a straddling accumulation is established. The evidence gathered and presented by the Parties in this arbitration, let alone the evidence available at the time, does not show that such an accumulation was established.

391. In this respect, the only substantive analysis on which the October Directive relied was the 2020 GNPC Report. As discussed earlier, that report provided no ground to conclude positively on the presence of a single accumulation as it must be understood under Section 34(1) of the Petroleum Act.

392. Moreover, although the October Directive invoked the 2020 GNPC Report to impose unitisation, the record shows that the MoE had made a decision to impose unitisation terms well before it even commissioned the 2020 GNPC Report on 29 September 2020.[405] In August 2020, before the October Directive and the 2020 GNPC Report, the MoE had already decided that unitisation would be imposed. Deputy Minister Mercer's testimony at the hearing was clear in this respect:

> "Q. So by 19 August 2020, your evidence is that the Minister had decided that there would be unitisation. The sole remaining question for the parties was to determine each party's participating interest in the accumulation?
>
> A. Madam President that's my belief.
>
> Q. And is that why, on or before 18 September 2020, if you look at the final bullet, the instruction was for the parties to, "Submit a joint report to the Minister only on each party's respective interest"; in other words, their tract participation; correct?
>
> A. That is my belief, Madam President."[406]

405 Exh. R-47, Letter from the Ministry to GNPC, 29 September 2020.

406 Transcript, Day 3, 85:20-86:24.

393. The record further shows that Springfield was aware of the MoE's decision well in advance of the October Directive. GCA's internal emails from September 2020 show that Springfield's CEO Mr. Kevin Okyere had informed GCA that the MoE had made the decision:

> Kevin [Okyere] has also called (…) Ministry and Petroleum Commission have come up with their unitisation decision already! Apparently we will be working on the redetermination.[407]

394. It follows, that contrary to the text of the October Directive, the 2020 GNPC Report did not form a substantive basis for the MoE's decision to impose unitisation.

395. Third, it is not disputed that the unitisation measures were imposed at a time when Springfield had not appraised the Afina Discovery. To the Tribunal's understanding, such appraisal is still not carried out to date.

396. Pursuant to Section 95 of the Petroleum Act, an appraisal consists of delineating the lateral extent of the recoverable petroleum and determining its commerciality:

> "appraisal" means operations or activities carried out following a discovery of petroleum for the purpose of delineating the accumulations of petroleum to which that discovery relates in terms of thickness and lateral extent and estimating the quantity of recoverable petroleum and all operations or activities to resolve all uncertainties required for determination of commerciality of a discovery.[408]

397. Thus, an appraisal would have determined the commerciality of the Afina discovery. As the Claimants' expert Mr. Wilks explained, major parameters of commerciality are porosity and permeability of the rocks that contain petroleum. These parameters generally deteriorate at deeper levels. The following slide defines and illustrates the

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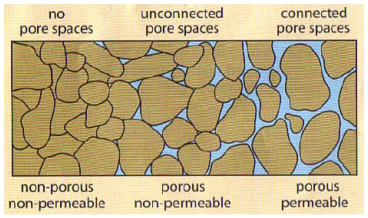
407 Exh. C-258, Internal emails within GCA, 16 September 2020.

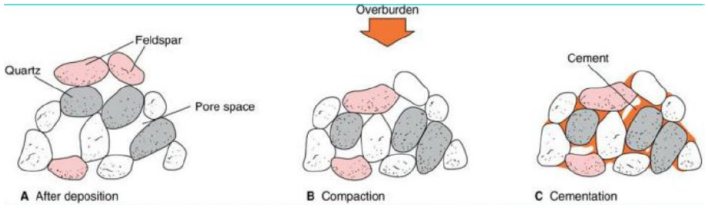
408 Exh. C-16, Petroleum Act, 2016, Section 95.

parameters of porosity and permeability and shows how such parameters deteriorate due to the gravity and pressure at deeper levels:[409]

Reduction in porosity & permeability with depth



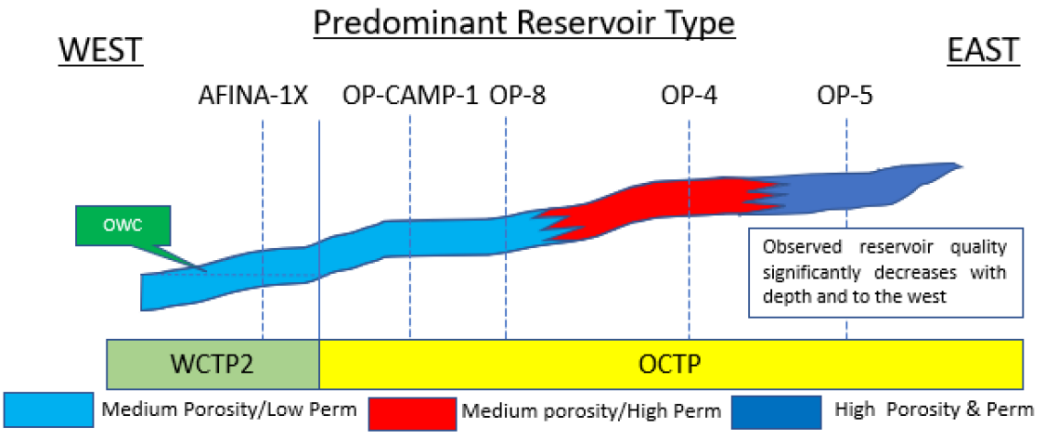
- **Porosity** - the void space between the individual grains of rock that contain fluids (both hydrocarbons and water) and controls the storage capacity of a reservoir; measure in %.
- **Permeability** is the ability, or measurement of a reservoir's ability, to efficiently transmit fluids; measured in millidarcies (mD).



Porosity & permeability are reduced as depth of burial increases, by compaction and by cementation.

398. As Mr. Wilks explained, his analysis of 20 exploration, appraisal and development wells and the historic production data from the Sankofa Field, together with the data from Afina-1X Well, showed that permeability and porosity decreased closer to the Afina Discovery, which is located at lower depths:[410]

Figure 2
A cross section showing the distribution of porosity & permeability across the Sankofa Cenomanian channel.



409 Wilks Presentation, Slide 9.

410 Wilks ER2, ¶¶ 80-89.

399. On the basis of this analysis and the location of Afina, Mr. Wilks concludes that "the chance of achieving commercial production rates at Afina […] is exceptionally low."[411]

400. For its part, in the presentation it made in March 2020 to the Petroleum Commission, Springfield identified 32 areas of uncertainty that requires appraisal for derisking.[412]

401. While the Tribunal need not (and without an appraisal having been conducted is not able to) determine whether the Afina Discovery is commercial or not, it is clear that there is a significant likelihood that the Afina Discovery would contain no commercially recoverable resources, which would render a unitisation devoid of purpose.

402. The Respondents do not dispute that an appraisal is required. They argue, however, that the appraisal should take place as a joint exercise following the unitisation. However, this chronology is not consistent with the terms and architecture of the regulations governing unitisation.

403. Regulation 50(4) of the Petroleum Regulations envisages the possibility of entering into a UUOA only after the completion of an appraisal:

> The relevant contractors shall submit to the Minister a draft unitisation and unit operating agreement […] within six months **after the finalisation of appraisal** of the petroleum accumulation.[413]

404. In addition, pursuant to Section 25 of the Petroleum Act, an appraisal shall take place after the notification of discovery within a period specified by the relevant petroleum agreement. Pursuant to Article 8.8 of the WCTP2 Petroleum Agreement, Springfield had two years from the notice of discovery to complete the appraisal programme.[414] Springfield gave notice of discovery with respect to Afina on 13 November 2019 and promised to notify an appraisal programme to the Minister in due course.[415] Thus, pursuant to the Petroleum Act and the WCTP2 Petroleum Agreement, Springfield was under an obligation to complete the appraisal by November 2021. According to the

411 Wilks ER2, ¶ 91.

412 Exh. C-174, Presentation by Springfield titled "Afina - Appraisal Assessment Methodology", 11 March 2020.

413 Exh. C-66, Petroleum Regulations, 2018, Regulation 50(4) (emphasis added).

414 Exh. C-8, WCTP2 Petroleum Agreement, 26 July 2016, Article 8.8; See also Djokoto, Transcript, Day 6, 156:20-25, 161:6-15.

415 Exh. C-12, Notice of the Afina Discovery, 13 November 2019.

record, Springfield has not complied with this obligation and the MoE has not sought to enforce it.

405. Instead of requiring Springfield to conduct an appraisal pursuant to Section 25 of the Petroleum Act, the October Directive appears to have allowed Springfield to bypass its appraisal obligation and to shift part of the burden and risk of the appraisal to the Claimants. As unit partners, the Claimants would be obliged to partake in the unit appraisal costs, which according to the Parties' experts would amount to approximately USD 153 million,[416] even though they had already incurred significant appraisal costs for the OCTP Block.[417] Although Springfield would be required to reimburse the Claimants for its share of the unrecovered Sankofa Field appraisal costs, this is accompanied by a retroactive adjustment of revenues from past production to reflect the respective interests. As a result, Springfield's contribution to the appraisal costs of the Sankofa Field are in effect funded, in part, by its entitlement following unitisation to revenues from past production at the Sankofa Field.[418] Moreover, even if the Afina Discovery were found to be non-commercial and would contribute no resources to the unitised field, the Claimants would additionally have borne part of the costs of the unsuccessful appraisal of the Afina Discovery. Such result defies the commercial logic of the distribution of risks under the Petroleum Agreement and finds no support in the applicable regulations.

406. Indeed, in addition to the fact that Regulation 50(4) expressly envisages an appraisal to precede the conclusion of a UUOA, the provisions governing appraisal are contained in the part of the Petroleum Act titled "Exploration", while the unitisation provisions are found in the part called "Development and Production". Development and production start only after "a discovery is declared to be commercial".[419] Unitisation, which falls within development and production, must thus postdate the completion of an appraisal, as the crucial parameters that an appraisal aims to determine are conditions precedent to determining whether there is a case for unitisation.

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416 Wilks ER2, ¶ 128; Wright ER2, ¶ 108.

417 Exh. C-2, Ghana OCTP Integrated Plan of Development Phase-1 (Oil), December 2014, p. 16 [E/56/16]: "During the exploration and appraisal campaign (2009-2013), a total of eight (8) wells (Sankofa-1, Sankofa-2A, Sankofa-2STA, Gye Nyame-1, Gye Nyame-2A, Sankofa East-1X, Sankofa East-2A and Sankofa East-3A) were drilled in the OCTP block."

418 Exh. C-31, Letter from the MoE to Eni and Springfield, 14 October 2020, p. 3.

419 Exh. C-16, Petroleum Act, 2016, Section 27.

407. The Respondents have not substantiated why the MoE decided to reverse the ordinary sequence envisaged by the Petroleum Act by imposing unitisation prior to requiring Springfield to appraise the Afina Discovery under Section 25 of the Petroleum Act. The Parties' experts agree that an appraisal would have determined such important parameters, as commerciality and the OWC of the Afina Discovery in a matter of months.[420] Thus, requiring Springfield to proceed with an appraisal would not have caused any significant delay in the development activities.

408. It is true that, given the proximity of the Sankofa Field and the Afina Discovery, the Claimants would likely be required to provide Springfield with data in order to facilitate the appraisal of the Afina Discovery. However, the MoE could have imposed the obligation of data sharing or coordination without imposing unitisation. At most, the MoE could arguably have ordered the parties to enter into a PUA, which would precisely envisage such data sharing and coordination, and the parties would have been required to comply with the MoE's order to that effect. According to the Respondents' expert Dr. Wright, "the appraisal is commonly undertaken using a Pre-unit Agreement (PUA) that provides the framework for the co-ordinated appraisal activities, defining what data is gathered and how the costs are shared".[421] However, as described above, the MoE directed Eni and Springfield to provide a draft UUOA rather than a PUA and thereafter proceeded with imposing unitisation terms. The objective of bringing about efficient data sharing between the Parties did not warrant such an interference with the Claimants' contractual rights.

409. For these reasons, the Tribunal concludes that the imposition of the unitisation terms by the October and November Directives violated important procedural and substantive rules applicable under the Petroleum Act and the Petroleum Regulations.

iii. The determination of the initial tract participation was arbitrary

410. As set out in the fact section, the October Directive determined an initial tract participation of 54.545% for the WCTP2 parties and 45.455% for the OCTP parties.[422] It did so by calculating and comparing in-place volumes of oil in the two contract areas, also referred to as STOOIP. This metric assesses the volumes of oil available underground and does not take into account whether and to what extent such oil is

420 Wilks ER2, ¶ 128; Wright ER2, ¶ 108.

421 Wright ER2, ¶ 28.

422 Exh. C-31, Letter from the MoE to Eni and Springfield, 14 October 2020.

commercially recoverable. It placed the Claimants at a disadvantage as they had already proven the commerciality of the Sankofa Field and had been exploiting the corresponding volumes for several years. By contrast, Springfield had not conducted an appraisal and it was thus uncertain that in place volumes in the Afina Discovery were commercially recoverable. The MoE has not applied any factor to discount the WCTP2 figures due to this uncertainty.

411. Even if STOOIP figures were accepted as appropriate, the MoE's calculation of those figures suffered from multiple flaws. One of the critical factors in estimating STOOIP volumes in the Afina Discovery is the OWC. OWC indicates the depth below which there is predominantly water and above which the oil is located. A lower OWC thus means that a larger share of the reservoir contains oil, increasing the estimate of the oil volumes.[423]

412. Multiple sources based primarily on the Afina 1-X Well data indicate that the OWC of the Afina Discovery corresponds to the estimate of the Claimants' expert, i.e. approximately -3959m TVDss:

- Based on fluid samples from the Afina Discovery, GNPC determined the OWC at -3976m TVDss in its P90 case.[424]
- GCA determined the OWC between -3958m and -3962m TVDss based on the wireline logs and modular formation dynamics ("MDT") data.[425]
- Eni and Vitol's contemporaneous technical evaluation of the Afina Discovery determined an OWC at -3959m TVDss based on wireline logs, MDT data, nuclear magnetic resonance data and wireline formation test pressure measurements.[426]

413. The MoE, however, ignored that data emanating from Afina 1-X Well and instead determined the OWC at -4130m TVDSS based on the regional aquifer level, relying on

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423 Wilks, Transcript, Day 4, 128:18-129:5.

424 Exh. C-32, 2020 GNPC Report, 6 October 2020, p. 27; P50 refers to a probabilistic model with a 50% chance of being exceeded.

425 Exh. C-240, Draft report by GCA titled "Competent Person's Report, Afina Discovery (Afina 1-X), West Cape Three Points, Block 2, Ghana", December 2019, p. 17; Exh. C-186, Report by GCA titled "Competent Person's Report, Afina Discovery (Afina 1-X), West Cape Three Points, Block 2, Ghana", April 2020, p. 16.

426 Exh. C-125, Eni and Vitol's Technical Evaluation of the Afina Discovery, 26 April 2021, p. 18.

GNPC's P50 case in the 2020 Report.[427] The MoE offered no plausible explanation as to why it preferred GNPC's figure based on the regional aquifer levels, rather than the figure derived from the Afina 1-X Well. This choice alone significantly increased Springfield's tract participation as it altered the STOOIP volume for Afina from 220 to 642 Mmbls.[428]

414. The *ex post* explanations given by the Respondents are not convincing. Dr. Wright noted that the lower OWC might have been based on the interpretation of the Sankofa pressure data by taking into account the intersection of the pressure gradient with that of the Paradise-1 well, which is considered to be on the regional aquifer level. According to Dr. Wright, this may signal that there is perched water in the Afina reservoir, making the existing Afina 1-X Well data unreliable for determining the OWC.[429]

415. However, as the Claimants' expert opined, perched water is an extremely rare occurrence and the available data is insufficient to substantiate Dr. Wright's hypothesis.

416. Perched water implies that oil is also found below the water body. The Afina 1-X well data did not find oil within over 50 meters deeper than the first water samples. It follows that, if this water was perched, it would be at least 50 meters deep. According to Mr. Wilks, perched water usually only occurs over "a few metres, not 50 metres".[430] Dr. Wright also acknowledged that he had never seen perched water of this size.[431] In addition, the available data show that the water encountered in the Afina Discovery did not exhibit properties characteristic of perched water, such as overpressure.[432]

417. If the MoE based the lower OWC assessment on the perched water hypothesis, it should have at least required Springfield to produce additional data to substantiate such hypothesis, instead of directly adopting the regional aquifer data. This underscores the importance of appraisal before the imposition of the unitisation terms, as the Tribunal already discussed.

418. Furthermore, it was inappropriate for the MoE to determine the tract participations based solely on the 2020 GNPC Report, without calling for any independent analysis,

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427 Exh. C-32, 2020 GNPC Report, 6 October 2020, p. 27.

428 Exh. C-32, 2020 GNPC Report, 6 October 2020, p. 28.

429 Wright ER2, ¶¶ 79 et seq.

430 Transcript, Day 4, 129:16-20.

431 Transcript, Day 5, 124:5-16

432 Wilks ER2, ¶¶ 118-119.

given that GNPC stood to benefit directly from affording a higher tract participation to the Afina partners, in which GNPC holds a higher participation than in Sankofa. Instead of approaching the 2020 GNPC Report with caution, the MoE went even a step further and selected the lowest figure of OWC in the GNPC Report. It is telling that the Respondents' expert Dr. Wright declined to opine on this selection:

> Q: Are you prepared to offer the Tribunal an opinion on whether, relying upon a number which you see as towards the maximum of the range, based on the current evidence, is in accordance with industry standard or do you prefer not to offer a view on that?
>
> A: I think I would prefer not to offer an opinion on that. [433]

419. The MoE's unsubstantiated choice increased the Afina partners' tract participation to the detriment of the Claimants' rights under the Petroleum Agreement.

420. For these reasons, the Tribunal considers that the initial tract participations determined by the MoE in the October and November Directives lacked justification. This yet again confirms that the completion of an appraisal was necessary prior to imposing unitisation and determining tract participations.

* * *

421. Overall, the Tribunal concludes that the unitisation measures adopted by the First Respondent suffered from multiple substantive and procedural flaws. In reaching this conclusion, the Tribunal did not analyse all of the Claimants' allegations and evidence, although it did consider them, given that the aspects reviewed proved sufficient to conclude that the unitisation was contrary to the applicable regulations and thereby breached Article 26(2) of the Petroleum Agreement. Similarly, none of the requests for adverse inferences summarized above turned out to be relevant and material to the Tribunal's reasoning, which is why it will dispense with resolving them.

422. For these reasons, the Tribunal holds that, by altering the key terms of the Petroleum Agreement through wrongful Unitisation Directives, the First Respondent violated Article 26(2) of the Petroleum Agreement.

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433 Transcript, Day 5, 108:25-109:9.

423. Further, as was noted above,[434] the Claimants have not put forward a proper cause of action against the Second Respondent, with the result that the claim for a declaration that the Second Respondent breached the Petroleum Agreement must be dismissed.

424. Finally, in addition to a declaration of breach of the Petroleum Agreement by the Unitisation Directives, the Claimants also seek a declaration that the Respondents breached the Petroleum Agreement by "refusing to withdraw or prevent reliance by third parties on the Unitisation Directives".[435] While the Tribunal considers that the First Respondent's breach of the Petroleum Agreement places it under a continued obligation to remedy the breach, the Claimants have not sufficiently established that the failure to withdraw the Unitisation Directives or to prevent reliance of third parties on the Unitisation Directives constitutes a self-standing violation of the Petroleum Agreement. As a consequence, while the Tribunal will declare that the First Respondent breached the Petroleum Agreement by issuing the Unitisation Directives, it will not grant the remainder of the Claimants' requests for relief (A) and (B).

C. REMEDIES

425. The Parties dispute whether the Claimants are entitled to the remedies they seek in this arbitration. In particular, they disagree on whether the Respondents' impugned conduct caused any harm given that the Unitisation Directives have not been implemented, so far. They also diverge on whether, if there is harm, the Claimants' quantification of such harm is reliable.

1. The Claimants' Position

426. In the Claimants' submission, the Respondents' argument that harm is a prerequisite for the admissibility of their claims arises from a flawed analogy with expropriation under investment treaties and must be rejected. The Claimants are claiming loss arising from the Respondents' breaches of contract. It is well-established and uncontroversial that a breach of contract is admissible per se and establishing harm or loss is irrelevant to admissibility.[436]

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434 *Supra*, ¶ 344.

435 Claimants' Reply PHB, ¶¶ 104(a) and (b).

436 Reply, ¶ 251, citing Exh. RLA-66, *Maersk Ghana Limited v. B. T. L. Limited* (2021) DLSC 10687 () at ¶ 32; Exh. CLA-16, Hugh Beale, *Chitty on Contracts*, 34th Ed., (Sweet & Maxwell) at ¶31-032; Exh. CLA-17, *Howell v Young* (1826) 5 B&C 259, 265.

427. According to the Claimants, the Respondents wrongly rely on *Glamis Gold*[437] and other investment awards to assert that "for the claims to be ripe, the measures must have interfered with a claimant's property interest and harmed the claimant". This argument misses the essential point that expropriation and breach of contract arise from wholly different systems of law.[438]

428. In any event, the Claimants dispute the Respondents' position that they have suffered no present harm because the unitisation terms imposed by the MoE have not yet been enforced. This position is at odds with the Respondents' simultaneous arguments that the Unitisation Directives "carry the force of law".[439]

429. The Claimants submit that the Respondents' argument on causation conflates causation and quantification of damages: causation is a matter of past fact, while quantification often requires an assessment of chances and contingencies because of the sensitivity to future or hypothetical events.[440] Therefore, say the Claimants, the Respondents are wrong when they suggest that the Claimants have suffered no present harm because the imposed terms of unitisation are not fully enforced. The harm already suffered by the Claimants is the violation of their rights under the Petroleum Agreement. The manner of their future enforcement is a matter for quantification which can be assessed on the balance of probabilities.

430. In this context, the Claimants refer to the October Directive, which declared the OCTP and WCTP2 interests "hereby unitised" and was stated to "take effect from the date of this letter".[441] The November Directive repeated these terms and provided additional ones that would ""supersede [ ] a UUOA and […] govern all unitisation and unit operations within the Unit Area". They also provided that the "Parties are to agree their commercial positions on any matters which are not expressly covered by the attached terms and conditions in accordance with industry standards and with reference to the precedent Jubilee UUOA".[442] Since the November Directive explicitly limits the parties' negotiations to "commercial positions on any matters not expressly covered", the

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437 RLA-31, *Glamis Gold v. United States*, UNCITRAL, Award (8 June 2009) (Young, Caron, Hubbard).

438 Reply, ¶ 254, citing: Exh. CLA-18, *Compañia de Aguas del Aconquija S.A. and Vivendi Universal S.A. v. Argentine Republic* (Decision on Annulment) (July 3, 2002) at ¶ 96.

439 Reply, ¶ 261; SoD, ¶ 253.

440 Reply, ¶ 262, citing: Exh. CLA-21, *Mallett v McMonagle* (1970) AC 166, 176.

441 Exh. C-31, Letter from the MoE, 14 October 2020, p. 3.

442 Exh. C-37, Second letter from the MoE, 6 November 2020.

Claimants dispute the Respondents' contention that "the specific tract participation is still under negotiation".[443]

431. Therefore, according to the Claimants, the risk that the Unitisation Directives will be enforced is virtually certain to materialize. Even if the Tribunal were to conclude that enforcement is less than certain, that assessment would not impact the Claimants' entitlement to damages in an amount that reflects the level of certainty that the Tribunal ascribes to the contingency.

432. In the alternative, the Claimants claim that they lost a chance to agree with Springfield on an industry standard process to assess the case for unitisation between the Afina Discovery and the Sankofa Field.[444] To succeed in such a claim, the Claimants submit that they "must prove as a matter of causation that they have a real or substantial chance as opposed to a speculative one."[445] They contend that the lost chance as a result of the imposed Unitisation Directives was substantial. By immediately imposing terms for unitisation, the opportunity for the Claimants to agree a PUA (or make any other pre-unitisation arrangements) was lost. In the Claimants' view, this leads to the same result as their primary loss theory, as the likelihood of Springfield demonstrating the case for unitisation in an arms-length transaction is "wholly speculative".[446]

433. The Claimants also assert that the governing compensatory principle is to "put the injured party in the same position as he would have been in but for the wrong".[447] Had the Respondents performed the Petroleum Agreement, the Claimants assert that they would have retained their rights under the Petroleum Agreement, unfettered and in full.

434. The Claimants proceed to establish the quantum of their claims on the basis that the terms imposed by the Unitisation Directives will eventually be enforced. They produce assessment of actual and but-for scenarios, highlighting that both scenarios involve contingencies, which are calculated on a percentage basis. As an example, the Claimants' actual scenario involves contingencies such as (i) when and how the

443 Reply, ¶ 278.

444 Reply, ¶ 375.

445 Exh. CLA-20, *Allied Maples Group Ltd v Simmons & Simmons* (1995) 1 WLR 1602, 1614.

446 Reply, ¶ 379.

447 Reply, ¶ 275, Exh. CLA-19, citing *Fyffes Group Limited and Others v Templeman and Others* (2000) 2 Lloyd's Rep 643, 667.

unitisation terms will be enforced; and (ii) how Springfield will utilise its 'blocking vote' under the unitisation terms.[448]

435. The Claimants further contend that, in the but-for scenario, they would in all likelihood have avoided unitisation. They would have considered the possibility of unitisation in a genuine arms-length transaction without coercion, which would have led Springfield to appraise the Afina Discovery and the parties sharing relevant data. The appraisal would have likely revealed that there was no case for unitisation. Therefore, according to the Claimants, the 'but for' scenario must assume that no unitisation would occur. In other words, the chance is too negligible[449] to be accounted for.[450]

436. In reliance on their quantum expert Dr. Stuart Amor, the Claimants assert that, as a result of the Unitisation Directives, they suffered the following heads of loss:

- Loss of revenues from oil production from the Sankofa Field (referred to by Dr. Amor as the "OCTP Oil Losses"): USD 295 million.[451] As the Unitisation Directives give the WCTP2 partners a 54.545% share of oil from the Sankofa Field, the Claimants suffer a loss of 54.545% of the profits from oil production from the Sankofa Field. This includes (i) losses associated with the deferral of associated gas handling activities, which would have increased oil production; and (ii) costs associated with carrying out an appraisal of the Afina Discovery and recovering those costs from the WCTP Block 2 participants only through the unit's revenues, i.e. Sankofa Field revenues;

- Loss of revenues from Non-Associated Gas ("NAG") production utilising the OCTP facilities (referred to by Dr. Amor as the "OCTP Gas Losses"): USD 470.5 million. The Claimants argue that unitisation terms have affected the conditions under which they sell NAG to GNPC as they: (i) make OCTP gas operations subject to the approval of the WCTP2 partners who would have no commercial interest in ensuring and maximising the

448 Reply, ¶ 285.

449 Wilks ER2, ¶ 127.

450 Reply, ¶¶ 359-360.

451 First expert report by Dr. Stuart Amor (“Amor ER1”), s. 4.

value of the OCTP gas operations;[452] and (ii) provide that oil operations "always have precedence" over conduct of non-unit operations, which includes the NAG operations. This results in a significant impediment to the Claimants' ability to maintain its NAG operations and supply GNPC under the GSA. That said, the Claimants acknowledge that the loss is contingent on Springfield's conduct. Therefore, while Dr. Amor has calculated the Claimants' interest in these gas operations at USD 2,352.4 million, the Claimants only claim 20% of that value, in order to account for the blocking vote of Springfield over the OCTP Project gas operations.[453]

- Loss of potential revenues from the development and tie-back to the existing OCTP facilities of the Eban and Akoma discoveries in Block 4 (referred to by Dr. Amor as the "CTP Block 4 Losses"): USD 68.6 million. Similar to the OCTP Gas Losses, the Claimants contend that the Unitisation Directives give Springfield a unilateral ability to prevent the development of the Block 4 discoveries by means of a tie-back to the OCTP facilities, which Springfield is likely to use as leverage against the Claimants. The Block 4 discoveries are currently the subject of an appraisal programme intended to enable a declaration of commerciality. Dr. Amor calculates the net present value of the Block 4 discoveries, based on data from Wood Mackenzie, at USD 489 million (using a discount rate of 14%), with Eni Ghana's 42.469% interest valued at USD 242 million. The Claimants claim 20% on that value as a result of the blocking vote afforded to Springfield in the unitisation imposed terms. In addition, the Claimants claim their consequential loss of revenues through tolling arrangements for use of capacity within the OCTP infrastructure by the Block 4 partners. Dr. Amor calculates the value of the Block 4 tolling revenues to the Claimants at USD 102 million, for which the Claimants again claim 20%, with a result of USD 68.6 million in total.

- Loss of management time (referred to by Dr. Amor as the "Process Losses"): approximately USD 14.5 million up to the date of Dr. Amor's report, and increasing at a rate of USD 429,000 per month (reaching USD

452 Exh. C-38, Terms and Conditions for the Unitisation and Unit Operations of the Afina field and the Sankofa field, Clause 6.2(b).

453 Reply, ¶ 333.

21.9 million for the date of the Claimants' PHB[454]). This amount includes the time and cost spent by the Claimants, their employees and consultants in relation to this dispute. For instance, Mr. Valenti estimates that he and twenty other members of the Eni team have spent around 40% of their time on the dispute since April 2020.[455] Dr. Amor applied standard daily rates of professionals and managers in the oil and gas sector to calculate such losses.[456] In addition, the Claimants claim costs associated with the Springfield Proceedings and ancillary applications: USD 3 million, which costs are expected to continue to be incurred at similar rates until the Ghanaian court proceedings come to an end.

437. Dr. Amor states that he was instructed to value the loss as of 31 December 2022.[457]

438. For all of the Claimants' losses other than the Process Losses (which are based on wasted costs), Dr. Amor used a discounted cash flow ("DCF") methodology.[458] He applied a discount rate of 14%, which he considers conservative, and conducted a sensitivity analysis, showing that the reduction of the discount rate to 12 or 10% would significantly increase the loss amounts.[459]

2. The Respondents' Position

439. The Respondents argue that the Claimants fail to prove that they suffered any harm proximately caused by the Respondents' allegedly wrongful conduct. According to the Respondents, the foremost and first requirement for an award of damages under Ghanaian law is that a claimant establishes actual loss or harm suffered as a result of the wrongful conduct.[460] This entails that the Claimants must prove their loss by producing "sufficient, strict and credible evidence" of all damages incurred.[461]

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454 Claimants' PHB, ¶ 532.

455 Valenti WS2, ¶ 130.

456 Amor ER1, s. 8.

457 Amor ER1, ¶ 2.6.

458 Amor ER1, ¶ 2.12.

459 Amor ER1, ¶¶ 2.16-2.17.

460 Rejoinder, ¶ 267, citing: Exh. RLA-118, *Assessment on Damages*, Paper Presented at Induction Course for Newly Appointed Circuit Judges at the Judicial Training Institute, p. 2.

461 Rejoinder, ¶ 268.

440. According to the Respondents, the Claimants have no reliable method for proving but-for causation, because the alleged harm on which their damages are based has not occurred. The damage claims are based on unitisation, which has not yet been enforced, and the terms and conditions of which have not become final. Therefore, under the *lex arbitri*, and in particular under the Swedish Code of Judicial Procedure which bars claims where payment is not yet due, the Claimants' damages claims are inadmissible. [462]

441. The Respondents further submit that, since the Claimants have not proven that they actually incurred loss, even if the Tribunal were to find that the Respondents breached the Petroleum Agreement, the Claimants would only be entitled to nominal damages. Under Ghanaian law, nominal damages, "are a trifling or small amount of money awarded to a plaintiff when a breach of contract or legal wrong is suffered but when there is no substantial loss or injury to be compensated."[463] As Ghana's Supreme Court noted, "the range awarded for nominal damages by the courts over the years is between £1 and £5."[464]

442. In any event, the Respondents dispute the quantification of the damage claims. Specifically, they challenge the assumptions on which the Claimants' quantification of loss is based as follows:

i. Assumption 1: Unitisation will proceed on the incomplete terms in the draft UUOA. For the Respondents, this assumption is wrong as the "Terms and Conditions for the Unitisation and Unit Operations" attached to the November Directive is a "draft document" and the MoE has requested Springfield and the Claimants to negotiate the terms of the UUOA.[465] The Claimants wrongly instructed their expert to assume that the unitisation terms had already been imposed. While the Unitisation Directives are binding and carry the force of law, this does not change their content;

ii. Assumption 2: Afina will be appraised in 2024 and the appraisal will cost USD 153 million. According to the Respondents, this assumption is erroneous as

462 SoD, ¶¶ 358-60.

463 Rejoinder, ¶ 357, citing: Exh. RLA-66, *Maersk Ghana Ltd. v. B. T. L. Ltd.* (2021) DLSC 10687, ¶ 31.

464 Exh. RLA-66, *Maersk Ghana Ltd. v. B. T. L. Ltd.* (2021) DLSC 10687, ¶.

465 Rejoinder, ¶ 277.

there is no evidence on the record that the Claimants intend to appraise Afina. In addition, the quantification of the appraisal costs is inconsistent with the Claimants' assertion that Afina would add no hydrocarbons to the unit. If the latter is the case, the Claimants would only incur the costs of re-entering the Afina 1-X Well, which according to their experts would only costs USD 50 million;

iii. Assumption 3: The Afina Discovery is not commercial, and the production of the Unit is the same as that of the Sankofa Field. According to the Respondents, the conclusion that Afina is not commercial is speculative and premature;[466]

iv. Assumption 4: There will be no redetermination and the OCTP participants will permanently lose 54.545% of the profits from oil production. According to the Respondents, this assumption lacks merits as at all times the MoE expressed its full commitment to facilitating and upholding a third-party redetermination, and Ghana has no interest in impeding such redetermination;[467]

v. Assumption 5: Ghana will maintain the initial tract participation even if the appraisal demonstrates that a different division is appropriate. According to the Respondents, this assumption, which was part of the Claimants' instructions to their expert, is meritless and contrary to the Claimants' assertion that the WCTP-2 contains no recoverable resources. If no additional hydrocarbon resources can be derived from the WCTP-2 side, the reasonable expectation is that the tract participation for the OCTP side would be adjusted to 100%, as Springfield anticipated in its letter to Eni;[468]

vi. Assumption 6: The WCTP-2 parties will not pay the so-called "True-up Payment" and the Afina appraisal costs and no interest will accrue on the unpaid amounts. According to the Respondents, the Claimants wrongly instructed their expert to make this assumption, since the October Directive expressly requires the parties to reconcile past costs "immediately"[469] and the draft UUOA sets forth a detailed

466 Rejoinder, ss. IV.A, IV.B, and IV.C.

467 Rejoinder, ¶ 296; second witness statement of Hon. Andrew Mercer ("Mercer WS2"), ¶¶ 9, 12-13, 21, 23.

468 Rejoinder, ¶ 300, citing : Exh. R-40, Letter from Springfield to Eni, 7 July 2020.

469 Exh. C-31, Letter from the Ministry, 14 Oct. 2020.

procedure for the reconciliation of pre-unitisation expenditures and the consequences of any party's default on such payment obligation;[470]

vii. Assumption 7: Springfield will "block" decisions related to OCTP gas operations and the tie-back of Block 4 petroleum developments. According to the Respondents, this assumption is based on an erroneous reading of Clause 8.9 of the draft UUOA which omits that the right to vote is "exercised by each respective Tract Operator in accordance with the determination of its Group under its Joint Operating Agreement." This specification means that for Springfield to "block" a decision, it would need to first meet the voting threshold within the WCTP-2 Group, which includes not only Springfield but also GNPC.[471] In any event, there is no evidence that either Springfield or the remaining WCTP-2 partners have an economic incentive to interfere in Claimants' OCTP gas operations or future development plans. The Claimants also mistakenly assume that the Respondents will not prevent Springfield from interfering with the OCTP gas project and the CTP-4 development plan;

viii. Assumption 8: Ghana's breaches resulted in lost profits related to the CTP-4 tie-back developments. For the Respondents, the claim for USD 68.6 million for "[l]oss of potential revenues" from yet-to-be-developed assets in CTP Block 4 - a distinct contract area governed by a separate contract - relies on a speculative report prepared by Wood Mackenzie. The latter assumes, without support, that Eban will be commercial and developed as a tie-back to the Sankofa Field FPSO;[472]

ix. Assumption 9: There is no mechanism to address the potential impact of unitisation on OCTP gas operations. The Respondents consider that there is no basis for this assumption. While the OCTP Project is an "integrated" project, the OCTP gas discoveries are physically distinct from the Cenomanian oil field, and subject to separate financing.[473] The Respondents' witness Mr. Owusu-Ansah testified that it could be addressed through cost apportionment if the Unit

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470 Exh. C-38, Terms and Conditions for the Unitisation and Unit Operations of the Afina field and the Sankofa field, Clause 4.5.

471 Rejoinder, ¶ 309, citing: Exh. C-38, Terms and Conditions for the Unitisation and Unit Operations of the Afina field and the Sankofa field, Clause 8.9(a)(ii); Exh. C-153, Guidance Notes to AIPN 2020 Model Form International Unitisation and Unit Operating Agreement, p. 17.

472 Rejoinder, ¶¶ 319 et seq., citing: Exh. SA-11, Wood Mackenzie, September 2022.

473 SoD, ¶ 36.

Operation's usage of the FPSO for oil production were to lead to less capacity for the gas operations;[474]

x. Assumption 10: The associated gas handling activities will remain "delayed indefinitely" due to the Unitisation Directives. According to the Respondents, the Claimants offer no reason why, under the unitised scenario, they would forever postpone investments that in the Claimants' own assertion bring about substantial additional oil production. As Mr. Owusu-Ansah explained, GNPC has approved the work programme and budgets for the productivity enhancement activities and any delay had nothing to do with the unitisation dispute.[475]

xi. Assumption 11: Process Losses are recoverable as damages in this arbitration. The Respondents oppose the claim for USD 3 million in fees spent on the Springfield Proceedings and USD 14.5 million in management costs lost due to the Unitisation Directives. These damages are wholly unsubstantiated and based on "persona[l] estimate[s]" of Claimants' witnesses who kept no timesheets. Additionally, these claims are not linked to any of the Respondents' alleged breaches of the Petroleum Agreement.

443. In reliance on their quantum expert Dr. Daniel Flores, the Respondents submit that, even if the Claimants' assumptions were accepted, the damage quantification is in any event grossly inflated. Dr. Flores criticizes the following elements in particular:

i. Arbitrary percentages: The Claimants' calculation adopts arbitrary percentages. For instance, the Claimants apply a random percentage of 20% on OCTP Gas Losses. The Claimants' expert opined that "[i]t is difficult to accurately assess the size of the lost profit percentage that should be applied in this situation".[476] He also noted that he was instructed to present a range of losses based on 10%, 15% and 20%. Likewise the Claimants' computation of CTP-4 Block Losses depends on unsupported percentages assigned to the alleged value of Eni's interest in Block 4 and the alleged value to Claimants of tolling Eban oil.[477]

474 Second witness statement of Mr. Benjamin Owusu-Ansah ("Owusu-Ansah WS2"), ¶ 23.

475 Rejoinder, ¶ 357-358; Owusu-Ansah WS2, ¶ 36.

476 Citing: Amor ER1, ¶ 2.24.

477 Rejoinder, ¶ 344.

ii. Discount rate: There is no basis for Dr. Amor's discount rate of 14%. It does not represent the OCTP Project's cost of debt.[478] It is therefore not representative of the risk of the project's cash flows. The rate further (i) understates the equity risk premium; (ii) understates the country risk premium; (iii) ignores that the OCTP Project is not a large publicly-traded company; and (iv) for the alleged CTP Block 4 Losses, ignores that Eban is not in operation.[479]

444. For these reasons, the Respondents conclude that the Claimants' damages claim is inadmissible and in any event unfounded.

3. Analysis

445. It is not disputed that, under Ghanaian law, a contractual breach entails an obligation to "put the injured party in the same position as he would have been in but for the wrong".[480] Accordingly, any compensation that may be awarded would need to place the Claimants in the economic situation in which they would have been but for the wrongful Unitisation Directives. When comparing the Claimants' situation in the absence of the Unitisation Directives with their actual situation, the Tribunal cannot ignore that the Unitisation Directives have not yet been enforced. Neither can it disregard that the Unitisation Directives provide for the possibility of a redetermination of the initial tract participations based on the results of an appraisal.

446. The record evinces that the October and November Directives did enter into force and that they became binding upon issuance. Since then, the Parties have engaged in this arbitration and in local litigation and the terms of the Unitisation Directives have not been implemented.

447. In addition, the implemented tract participations imposed by the unitisation terms are subject to redetermination based on the results of a forthcoming appraisal. In this respect, the Tribunal takes due notice of the Respondents' representation that "[i]f appraisal proves that Afina is not commercially viable and no additional hydrocarbon resources can be derived from the WCTP-2 side, the reasonable expectation is that the tract participation for the OCTP side would be adjusted to 100%."[481] Although this

478 Rejoinder, ¶ 345.

479 First expert report by Dr. Daniel Flores of Quadrant Economics ("Flores ER1"), ¶¶ 358-360.

480 Exh. CLA-19, *Fyffes Group Limited and Others v. Templeman and Others* [2000] 2 Lloyd's Rep 643.

481 Rejoinder, ¶ 300.

representation expressly aims at the situation where the Afina Discovery generates no commercial resources at all, the Tribunal understands it more generally to represent that the tract participations will be adjusted to the actual proportions of resources determined by appraisal.

448. The Claimants' damages analysis is based on the assumption that the unitisation terms will be implemented and that the tract participations will not be adjusted.[482] It is correct that, as the Claimants argue, in principle, damages can be assessed based on contingencies.[483] However, the Claimants' damages claim is not based on contingencies related to the enforcement of the Unitisation Directives and the absence of the redetermination. It takes these potential occurrences as if they were established facts. Unsurprisingly, the Claimants have not proven that these future facts will necessarily occur.

449. Further, the Claimants have calculated their damages on the assumption that the WCTP2 partners, Springfield and GNPC, will not pay the True-up Payment due under the October Directive.[484]

450. As the Claimants' expert Dr. Amor rightly explains, the terms and conditions of the unitisation provide for a reconciliation of cumulative net defined cash flow and further provide that defined historical unit costs should include "all costs starting from the development of either the Sankofa or the Afina side of the Unit Area."[485] The unitisation terms also provide that any party with a positive balance, i.e. a party which has paid costs in excess of its tract participation, shall immediately be compensated by the party with a negative balance, i.e. a party which has paid costs below its tract participation. This adjustment mechanism is referred to as the True-up Payment.

451. Dr. Amor has calculated the True-up Payment that is immediately due by the WCTP2 partners to the OCTP partners at USD 838 million,[486] but assumes that the Claimants will not collect this payment. The latter assumption is inconsistent with the assumption that the unitisation terms will be enforced. If the ongoing judicial review litigation, and

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482 Amor ER1, ¶ 1.32.

483 Reply, ¶ 261.

484 Amor ER1, ¶ 1.25.

485 Exh. C-38, Terms and Conditions for the Unitisation and Unit Operations of the Afina field and the Sankofa field, Articles 4.5, 5.5 and 8.9.

486 Amor ER1, ¶ 1.21.

irrespective of this award, the Unitisation Directives remain in force and end up being enforced, it is reasonable to assume that the terms regarding the True-up Payment will also be enforced.

452. Therefore, the Tribunal considers that the damages claim currently before it is grounded on unsubstantiated assumptions and must be dismissed on this threshold basis.

453. This determination is without prejudice to the Claimants' right to claim damages if, despite this award, the wrongful Unitisation Directives are enforced, provided that Claimants are of course able to establish their loss(es) and evidence the quantum of their damages claim(s), whether arising from the failure to receive the True-up Payment or a failure to redetermine the arbitrarily determined initial tract participations or otherwise.

454. The above reasoning does not apply to the claim for so-called process losses. However, the Tribunal notes that the Claimant has not sufficiently established the quantum of the process losses or the fact that they were directly caused by the Unitisation Directives. The calculation of the process losses is based on estimates that are not sufficiently substantiated with contemporaneous records, such as time sheets or calculations. The Claimants and their expert have also failed to sufficiently explain the basis for the calculation of the rates of the management, based on which they calculated the process losses. Therefore, the Tribunal dismissed this segment of the alleged damages.

455. Finally, the Claimants have raised two claims seeking an order that the First Respondent notify the High Court, the Court of Appeal and the Supreme Court of Ghana, as well as Springfield that the Unitisation Directives were issued in breach of the Petroleum Agreement.[487] The Tribunal considers that the Claimants have not shown the legal basis for such claims. Nor have they established that these fall within one of the categories of relief recognized under Ghanaian law. The Tribunal will therefore dismiss the Claimants' requests (c) and (d).

487 Claimants' Reply PHB, ¶¶ 104 (c) and (d).

D. COUNTERCLAIMS

456. The Parties dispute whether the Claimants violated the Petroleum Agreement by refusing to cooperate in the implementation of the Unitisation Directives.

1. The Respondents' Position

457. The Respondents counterclaim that, by refusing to comply with the Unitisation Directives, the Claimants have breached their obligations under Petroleum Agreement to operate with utmost diligence and efficiency and maximize recovery of petroleum under Articles 7.1(a), 7.1(b), and 17.4, as well as their obligation to comply with the Unitisation Directives pursuant to Articles 7.1(b), 17.2, and 26.1 of the Petroleum Agreement.

458. In the Respondents' submission, their counterclaim is within the jurisdiction of the Tribunal, as the Petroleum Agreement contains a very broad arbitration agreement. According to Article 24.1, a Party may submit to international arbitration "any dispute or difference arising between the State and GNPC or either of them on one hand and Contractor on the other hand in relation to or in connection with or arising out of any terms and conditions of this Agreement." Article 19(3) of the 1976 UNCITRAL Rules is similarly broad, requiring only that the counterclaim "aris[e] out of the same contract".

459. According to the Respondents, it is undisputed that the purpose of unitisation is to minimise development costs, waste and environmental impact and maximise economical and efficient recovery of petroleum.[488] The Claimants' refusal and obstruction of the unitisation process thus violated their obligations of economical and efficient operation as well as the "duty to comply with applicable laws and regulations. In particular, the Claimants directly breached the obligation to "take all practicable steps" to ensure that the accumulation straddling the OCTP and WCTP-2 blocks would be developed with "utmost diligence, efficiency and economy, in accordance with accepted petroleum industry practices". They also violated the obligations to "maximise the ultimate recovery of petroleum from a petroleum field" and to "take reasonable steps" to avoid costly duplication of effort, waste of petroleum, and damage to the oil field.[489]

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488 Rejoinder, ¶ 373, citing Wilks ER2, ¶ 35.

489 Exh. C-1, Petroleum Agreement, 2 March 2006, Articles 7.1(a)-(b), 17.4; Exh. RLA-16, Exh. RLA-16, Petroleum (Exploration and Production) Act 1984, Section 3(1).

460. The Respondents specifically refer to several actions of the Claimants which they allege to be contrary to the provisions just referred to.[490] Specifically, when the Petroleum Commission approached Eni in March 2020 in connection with Springfield's request for unitisation, Eni refused to provide any technical documentation to aid or inform the Commission's data analysis.[491] Initially, the Claimants did not respond to the April Directive or to Springfield's 29 April 2020 letter attempting to launch discussions.[492] When they finally reacted, the Claimants refused to collaborate unless the terms of the April Directive were suspended.[493] Following Springfield's Writ of Summons in July 2020, Eni terminated discussions with Springfield without explaining why the court proceedings would prevent the parties from pursuing efforts to implement the April Directive.[494] When the Ministry proposed a Joint Technical Team to evaluate the Sankofa-Afina data and confirm or refute the 2020 GNPC Report, the Claimants did not nominate anyone to the Joint Technical Team, despite the Ministry's repeated requests.[495]

461. It is the Respondents' case that the Claimants likewise declined to comply with the October and November Directives, replacing the Ministry's judgment and authority with their own.[496] Following the October Directive, the Claimants notified the Ministry that they "look[ed] forward to receiving [the Ministry's] confirmation as soon as possible of the withdrawal of the purported terms and condition[s]," warning that they would "not hesitate to escalate this matter" through all avenues.[497] In the same vein, after the November Directive, the Claimants insisted that "the Ministry's unilateral attempt to impose conditions for the unitisation […] [was] invalid" and that they had to assess for themselves that unitisation was warranted in order for the process to continue.[498]

462. For the Respondents, the Claimants' breaches have inflicted harm on them, having delayed and prevented the optimal recovery of the Cenomanian accumulation that

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490 Rejoinder, ¶ 374.

491 Exh. C-20, Letter from the Petroleum Commission to the Ministry, 2 Apr. 2020.

492 SoD, ¶¶ 119-120.

493 SoD, ¶¶ 121-134.

494 Exh. C-103, Email from Eni to Springfield, 23 July 2020.

495 Exh. C-41, Letter from the Ministry to Eni, 23 Dec. 2020.

496 Exh. C-34, Letter from Eni and Vitol to the Ministry, 28 Oct. 2020, p. 3; Exh. C-35, Letter from Eni to the Ministry, 24 Nov. 2020, p. 2.

497 Exh. C-34, Letter from Eni and Vitol to the Ministry, 28 Oct. 2020.

498 Exh. C-35, Letter from Eni to the Ministry (24 Nov. 2020), p. 1.

extends across OCTP and WCTP2, leading to lower royalties, corporate taxes, and additional oil entitlements.[499]

463. According to the Respondents, "the clear foreseeable and natural consequence" of Claimants' failure to conduct the joint appraisal of Afina was that the joint appraisal did not take place. Hence, they find that "[a]n appropriate measure of that harm is the cost of conducting the appraisal of Afina."[500] They add that, while the appraisal costs do not capture the loss of revenue that the State suffered, they would compensate the Respondents conservatively and at least in part.

464. To quantify the appraisal costs, the Respondents rely on the estimate of the Claimants' expert Mr. Wilks, which amounts to USD 153 million and specify that the Claimants do not dispute that "Government take is 55%".[501] The Respondents thus compute their loss by multiplying USD 153 million with 0.55 which yields damages in the amount of USD 84.15 million. They claim simple interest at the prevailing bank rate accruing from 31 December 2020.[502]

2. The Claimants' Position

465. The Claimants submit that the counterclaims are not within the jurisdiction of the Tribunal as they essentially allege violations of Ghanaian law, and in particular of the Unitisation Directives, and not of the Petroleum Agreement. For the same reason, the counterclaims do not arise "out of the same contract" as required by Article 19(3) of the UNCITRAL Rules, with the result that they are inadmissible.[503]

466. As for the merits of the counterclaims, the Claimants argue that none of the provisions of the Petroleum Agreement upon which the Respondents rely is relevant to the Claimants' alleged violation of the Unitisation Directives. The Respondents invoke provisions that require the Claimants to operate the contract area in an economical and

499 Rejoinder, ¶¶ 388 et seq.

500 Rejoinder, ¶ 393.

501 Second witness statement of Mr. John-Paul Stalder ("Stalder WS2"), ¶ 30 ("At the time of the Integrated Plan of Development we forecast that the State through Royalty, GNPCs share and taxes would receive ca. 55% of the net cashflow from the project over the licence period.").

502 Rejoinder, ¶ 395.

503 Reply, ¶ 394.

efficient manner and to ensure the compliance with applicable laws and regulations. In particular:

i. Article 7.1(a) obligated the contractor conduct "Petroleum Operations" with diligence and efficiency. Petroleum Operations is defined as "all activities […] relating to the Exploration for, Development, Production, handling and transportation of Petroleum contemplated under this Agreement". The provision thus extends to operations in the area defined by the Contract and imposes no obligations in respect of unitisation, or the unitised area.

ii. Article 7.1(b) obliges the contractor to comply with Section 3 of the Petroleum Act, by "ensuring the recovery and prevention of waste of Petroleum in the Contract Area". Thus, the obligation is limited to the Contract Area and does not extend to the unitised field.

iii. Although Article 17.4 may be construed to require the Claimants to take responsibility for matters outside the Contract Area, these are all instances of safety and environmental protection, such as preventing "damage to onshore lands and trees". However, the alleged lack of compliance with the unitisation is unrelated to a breach of the safety and environmental protections. The Respondents do not explain how Article 17.4 is engaged by the Claimants' alleged violation of the Unitisation Directives.

iv. Article 17.2 requires the Claimants to "comply with all requirements of governing law, including all applicable labour, health and safety and environmental laws and regulations in force from time to time." However, the title of Article 17 is "Inspection, Safety and Environmental Protection" and its other sub-provisions all relate to this subject-matter. While a justified unitisation may reduce waste of petroleum, this is related to the economic efficiency of the recovery of the petroleum and has no connection with safety and environmental protection covered under Article 17.2.

v. Article 26.1 is in turn a governing law provision and does not purport to impose any obligation on the Claimants to comply with (and not lawfully to challenge) an invalid directive of the MoE.[504] A contrary reading of the provision would make the stabilization provisions contained in the same article illusory.

[504] Reply, ¶ 390.

467. According to the Claimants, the Respondents have not purported to show that the Claimants somehow failed to "conduct Petroleum Operations with utmost diligence, efficiency and economy" in the Contract Area or that they have not complied with the plain meaning of Ghanaian "labour, health and safety and environmental laws and regulations". The counterclaims therefore lack merit.

468. Further and in any event, the Claimants contend that the Respondents have failed to show that they incurred loss that was caused by the Claimants' alleged breaches of the Petroleum Agreement.

3. Analysis

469. The Respondents' counterclaim arises from the Claimants' alleged breach of the Petroleum Agreement resulting from their non-compliance with the Unitisation Directives. However, as the Tribunal concluded in the analysis of the claims, the Unitisation Directives were themselves issued in violation of the Ghanaian law and contrary to the stabilization guarantee provided in Article 26(2) of the Petroleum Agreement.

470. The Respondents have not shown that the provisions of the Petroleum Agreement that they invoke in support of their counterclaim, i.e. Articles 7.1(a), 7.1(b), 17.4, and 26.1, impose an obligation on the Claimants to comply with measures that are contrary to the stabilization regime of the Petroleum Agreement.

471. The relevant parts of Articles 7.1(a) and (b) of the Petroleum Agreement oblige the Contractor to "conduct Petroleum Operations with utmost diligence, efficiency and economy" and "take all practicable steps to ensure compliance with Section 3 of the Petroleum Law", all "subject to the provisions of this Agreement". Accordingly, the Claimants' obligation to comply with industry practice and with the Petroleum Act is subject to the provisions of the Petroleum Agreement, including its stabilization regime. The Claimants' non-compliance with the unlawful Unitisation Directives can therefore not qualify as failure to operate with diligence and efficiency and pursuant to the Petroleum Act.

472. Similarly unavailing is Article 17.4 of the Petroleum Agreement, which requires the Contractor to "exercise its rights and carry out its responsibilities under this Contract in accordance with accepted petroleum industry practice". The alleged lack of compliance with the wrongful Unitisation Directives cannot be deemed to contravene petroleum industry practice.

473. Finally, Article 26(1) of the Petroleum Agreement is the contractual choice of law. It provides that "[t]his Agreement and the relationship between the State and GNPC on one hand and Contractor on the other shall be governed by and construed in accordance with the laws of the Republic of Ghana consistent with such rules of international law as may be applicable, including rules and principles as have been applied by international tribunals." This choice of law cannot be intended to create an obligation of compliance with measures that are contrary to Ghanaian law.

474. For these reasons, the Tribunal reaches the conclusion that the counterclaim is unfounded. However, for the avoidance of doubt, the Tribunal's conclusion should not be understood as absolving Claimants from any contractual or legal obligation to comply with lawful directives issued according to the applicable Ghanian law.

E. COSTS

475. Each Party requests that the Tribunal order the opposing Party to bear the entirety of the costs. Such costs include: (i) the party costs, which comprise the costs of legal representation, as well as witness/expert fees and expenses, and (ii) the costs of arbitration, which comprise the fees and expenses of the arbitral tribunal and SCC.

476. The costs that the Claimants claim are summarized in the following table contained in their Costs Submission:

No.	Description	Amount (USD)
1.	Herbert Smith Freehills' Legal Fees[1]	5,878,865.29[2]
2.	Herbert Smith Freehills's Disbursements	188,669.19
3.	Advance on SCC Costs and Arbitrator Fees	376,800.00
Expert Fees		
4.	FTI Consulting, Inc.	1,083,240.11
5.	Atuguba & Associates	444,033.54
6.	SLR Consulting	570,739.73
Local Counsel Fees[3]		
7.	Mannheimer Swartling AB	62,767.97
8.	Kimathi & Partners	80,048.90
9.	ENSAfrica Ghana	31,800.00
TOTAL		**8,716,964.73**

477. The Respondents' costs appear in the following table from their Costs Submission:

Legal Fees	
Fees of Foley Hoag LLP[1]	USD 4,406,135.86
Costs for Expert Services	
Fees and expenses of Respondents' experts on Ghanaian law, Swedish law, technical oil and gas matters, and valuation	USD 1,371,758.60
Travel Costs for Respondents' Witnesses and Party Representatives[2]	
Costs incurred by Respondents' witnesses and party representatives in relation to travel to Paris for the hearing	USD 683,274.55
Administrative Costs	
Travel, printing, telephone usage, office charges, hearing administration, graphic preparation, evidence projection, IT, and other administrative costs	USD 393,468.30

SCC Advance Payments[3]	
SCC advance payments	EUR 379,800

Total Arbitration Costs	USD 6,854,637.31 EUR 379,800

478. Pursuant to Article 13(2) of the SCC Procedures for UNCITRAL Cases, on 2 July 2024, the SCC fixed the costs of arbitration as follows:

Gabrielle Kaufmann-Kohler

Fee	EUR 289 500	Plus any VAT*
Expenses	EUR 6 793.62	Plus any VAT*
Expenses	CHF 750	Plus any VAT*

Judith Gill		
Fee	EUR 173 700	Plus any VAT*
Expenses	GBP 400.80	Plus any VAT*
Expenses	EUR 5 949.75	Plus any VAT*
Expenses	SGD 4 703.46	Plus any VAT*
Mohamed S. Abdel Wahab		
Fee	EUR 173 700	Plus any VAT*
Expenses	EUR 12 302.79	Plus any VAT*
David Khachvani		
Expenses	EUR 5'210.14	Plus any VAT*
SCC Arbitration Institute		
Administrative fee	EUR 70 000	Plus any VAT*

479. In addition, the SCC advised the Tribunal that it could allocate the fees among its members differently in the Final Award. Accordingly, the Tribunal members agreed that the arbitrator fees would be split among them such that the President receives 50% of the total fees (i.e. EUR 318,450) and each co-arbitrator receives 25% (i.e. EUR 159,225).

480. As for the VAT, the SCC has advised the Tribunal that the portion of SCC's administrative fee payable by the Republic of Ghana is subject to 25% VAT which must be expressly mentioned in the award, while portion of the administrative fee payable by the Claimants and Ghana National Petroleum Corporation is free of VAT. Accordingly, considering that each of the four Parties is liable for a quarter of SCC's administrative fee, the Republic of Ghana shall pay an additional amount of EUR 4,375 for the VAT.[505] No other component of the costs of arbitration is subject to a VAT.

481. In relation to the allocation of costs, Article 42 of the Swedish Arbitration Act provides the Tribunal with the power to make a cost award:

> Unless otherwise agreed by the parties, the arbitrators may, upon the request of a party, order the opposing party to pay compensation for the party's costs and determine the manner in which the compensation to the arbitrators shall be finally

[505] 70,000 x 25% x 25% = 4,375

> allocated between the parties. The arbitrators' order may also include interest, if a party has so requested.

482. Article 13(7) of the SCC Procedures for UNCITRAL Cases sets out the principles based on which the costs of arbitration must be apportioned:[506]

> The costs of the arbitration shall in principle be borne by the unsuccessful party or parties. However, the arbitral tribunal may apportion each of such costs between the parties if it decides that apportionment is reasonable, taking into account the circumstances of the case.

483. Thus, in principle, the costs must be apportioned in favor of the prevailing party. While Article 13(7) concerns the costs of arbitration, the principle that the costs must follow the event is widely applied in international arbitration to both party costs and the costs of arbitration.[507] In addition, the Tribunal may take into account relevant circumstances, such as the Parties' procedural conduct and the reasonableness of their costs.

484. In terms of the outcome of the proceedings, the Tribunal notes that the Claimants had to resort to arbitration to vindicate their rights and prevailed on liability with respect to one of the two Respondents, and on the counterclaims. At the same time, one Respondent was not held liable and the Respondents have successfully rebutted the substantial claim for damages put forward by the Claimants.

485. As for the Parties' procedural conduct, the Parties and counsel conducted these proceedings in a professional and collegial manner. While each Party made procedural motions with varying degrees of success, none of such motions was abusive or inappropriate. Thus, the Tribunal does not consider that the procedural conduct provides a basis for imposing costs on either Party.

486. Finally, the Tribunal notes that, as summarized above, the costs claimed by the Parties appear reasonable considering the amounts at stake and the complexity of the dispute, including difficult factual, technical and legal matters. While the Claimants' costs are higher, there is no major disparity.

487. Based on an overall assessment of all the relevant elements, the Tribunal considers it fair and appropriate that each Party bear its own costs. As for the Tribunal and SCC costs, the Respondents shall bear their portion of the costs, and the First Respondent

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506 Pursuant to Article 12 of the SCC Procedures for UNCITRAL Cases, its Articles 13 and 14 replace Articles 38, 40 and 43 of the 1976 UNCITRAL Rules.

507 See, ICC Commission Report Decisions on Costs in International Arbitration, ICC Dispute Resolution Bulletin 2015, Issue 2.

shall pay 50% of the costs incurred by the Claimants. Accordingly, the First Respondent shall pay EUR 189,900 to the Claimants, which corresponds to 50% of the amounts advanced by the Claimants for the costs of arbitration.[508]

488. Finally, the Tribunal notes that the Claimants request "compound interest on any and all sums awarded to the Claimants at a rate and at such rests as the Tribunal may consider appropriate".[509] However, the Claimants have not sufficiently substantiated the basis and modalities of interest in respect of costs. Therefore, the Tribunal will not award interest.

V. OPERATIVE PART

489. For the foregoing reasons, the Tribunal:

i. Declares that the Republic of Ghana breached the Petroleum Agreement by issuing the Unitisation Directives in the circumstances in which they were issued;

ii. Declares that each Party shall bear its own costs;

iii. Orders the Republic of Ghana to pay to Eni Ghana Exploration and Production Limited and to Vitol Upstream Ghana Limited EUR 189,900 for the costs of the Tribunal and SCC;

iv. Dismisses all other requests for relief.

490. A Party may challenge this Award pursuant to Section 34 of the Swedish Arbitration Act (Swedish Code of Statutes SFS 1999:116, updated by SFS 2018:1954) within two months of receipt.

491. Pursuant to Section 41 of the Swedish Arbitration Act, a Party may bring an action against the award regarding the decision on the fee(s) of the arbitrator(s) within two months from the date when the Party received the award. Such action should be brought before the Stockholm District Court.

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508 The Tribunal notes that the figure of USD 376,800 contained in the Claimants' statement of costs as corresponding to the amount advanced by the Claimants is inaccurate both in terms of currency and amount. In fact, each Party advanced EUR 379,800. The Tribunal will use the correct figure.

509 Claimants' Reply PHB, ¶ 104(g).

Seat of Arbitration: Stockholm, Sweden

Date: 8 July 2024

Ms. Judith Gill KC
(Arbitrator)

Prof. Dr. Mohamed Abdel Wahab
(Arbitrator)

Prof. Gabrielle Kaufmann-Kohler
(President)