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**Re: Potential Unreported Material Changes and/or Misrepresentations made by Reconnaissance Energy Africa Ltd.**

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## **I. Introduction**

Through this document, Above Ground, the Center for International Environmental Law, and the Global Law Alliance for Animals and the Environment respectfully request that TSX Venture Exchange investigate the conduct of Reconnaissance Energy Africa Ltd. (“ReconAfrica” or the “Company”) (TSXV: RECO) for what may be unreported material changes to its business operations and/or material misrepresentations made in its filings on the System for Electronic Document Analysis and Retrieval (“SEDAR”) and other public communications, including on its website, in its investor presentations, and in statements to the press.

ReconAfrica, a junior oil and gas company incorporated in British Columbia, is “engaged in the identification, and the exploration and development of oil and gas assets via drilling and/or acquisition with a focus on Namibia and Botswana.”<sup>1</sup> Through its wholly owned subsidiaries, Reconnaissance Energy Namibia (Pty) Ltd. (“REN”) and Reconnaissance Energy Botswana (Pty) Ltd. (“ReconBotswana”), ReconAfrica holds petroleum exploration licences for more than 8 million acres of the Okavango Region, which spans the Namibia-Botswana border (an area ReconAfrica refers to as the “Kavango Basin”).<sup>2</sup> According to ReconAfrica, “the Namibia Licensed Property and the Botswana Licensed Property comprise an area comparable to the Eagle Ford Shale in Texas, USA and provide ReconAfrica with control of the entire Kavango Basin, which is potentially one of the largest onshore undeveloped hydrocarbon basins in the world.”<sup>3</sup>

As detailed below, there are indications that ReconAfrica may have: (a) made a material change to its business by shifting its focus from primarily targeting exploration and development of unconventional, shale-based oil and gas resources in the Kavango Basin to primarily or exclusively targeting conventional oil and gas resources without filing a material change report; and/or (b) made one or more material misrepresentations regarding the oil and gas resources targeted in its operations.<sup>4</sup>

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<sup>1</sup> ReconAfrica, Annual Information Form (AIF) for the Financial Year Ended December 31, 2019, filed on SEDAR on July 28, 2020 (“AIF for 2019”), at 8.

<sup>2</sup> See ReconAfrica, Amended and Restated AIF for the Financial Year Ended December 31, 2020, filed on SEDAR on May 19, 2021 (“Revised AIF for 2020”), at 8, 13.

<sup>3</sup> *Id.* at 8; see also AIF for 2019, at 8 (same language).

<sup>4</sup> Compare Schlumberger Oilfield Glossary, *Unconventional Resource*, [https://www.glossary.oilfield.slb.com/en/Terms/u/unconventional\\_resource.aspx](https://www.glossary.oilfield.slb.com/en/Terms/u/unconventional_resource.aspx) (last visited September 13, 2021) (defining “unconventional resource” in part as, “[a]n umbrella term for oil and natural gas that is produced by means that do not meet the criteria for conventional production. . . . Coalbed methane, gas hydrates, shale gas, fractured reservoirs, and tight gas sands are considered unconventional resources.”) with Schlumberger Oilfield Glossary, *Conventional Reservoir*, [https://www.glossary.oilfield.slb.com/en/terms/c/conventional\\_reservoir](https://www.glossary.oilfield.slb.com/en/terms/c/conventional_reservoir) (last visited September 13, 2021) (defining “conventional reservoir,” in part, by saying that “[t]he term is used to make a distinction from shale and other unconventional reservoirs...”). See also British Columbia Ministry of Natural Gas Development and Minister Responsible for Housing (BC MNGD &

## II. Applicable Securities Law<sup>5</sup>

### A. Securities Law Requires Companies to Report a Material Change

Prompt public disclosure of any “material change” concerning an Issuer’s business is obligatory under Canadian securities law.<sup>6</sup> “Public confidence in the integrity of the Exchange as a securities market requires timely disclosure of Material Information concerning the business and affairs of Issuers, thereby placing all participants in the market on an equal footing. Accordingly, ensuring complete, accurate and timely disclosure of Material Information is an integral part of an Issuer’s proper corporate governance procedures.”<sup>7</sup> If a material change occurs in the affairs of a reporting Issuer, the Issuer must immediately publish and file a news release disclosing the nature and substance of the change and, as soon as practicable, and in any event within 10 days of the date on which the change occurs, file a Form 51-102F3 Material Change Report with respect to the material change.<sup>8</sup> An oil and gas company that is a reporting Issuer “satisfies this important

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MRH), *Conventional versus Unconventional Oil and Gas* (undated), [https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-gas-oil/petroleum-geoscience/conventional\\_versus\\_unconventional\\_oil\\_and\\_gas.pdf](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-gas-oil/petroleum-geoscience/conventional_versus_unconventional_oil_and_gas.pdf) (“Conventional Resources are concentrations of oil or gas that occur in discrete accumulations or pools. ... Conventional oil and gas pools are developed using vertical well bores and using minimal stimulation. ... Unconventional Resources are oil or gas-bearing units where the permeability and porosity are so low that the resource cannot be extracted economically through a vertical well bore and instead requires a horizontal well bore followed by multistage hydraulic fracturing to achieve economic production. Unconventional resources fall into two broad categories: 1. A widespread, low-permeability and -porosity gas- or oil-charged horizon. If the horizon is composed primarily of shale, it is a ‘shale gas’ or ‘shale oil’ resource; and, 2. Low-permeability and -porosity portions of an oil or gas pool that cannot be developed through conventional drilling and completion processes.”).

<sup>5</sup> In this submission, we cite to TSX Venture Exchange (TSXV) Corporate Finance Policies set forth in the TSXV Corporate Finance Manual (the “Manual”) and National Instruments and Policies because, as noted in the Manual, in addition to TSXV disclosure and filing requirements, Issuers must comply with the relevant disclosure and other filing requirements prescribed by applicable securities laws. *See, e.g.*, TSXV Corporate Finance Policies, Policy 3.2 § 1.1; Policy 3.3 §§ Scope of Policy, 9.2 (“All oil and gas Issuers must comply with the applicable disclosure requirements set forth in National Instrument 51-101 – Standards of Disclosure For Oil and Gas Activities.”).

<sup>6</sup> Canadian Securities Administrators (CSA) Staff Notice 51-327 (Revised) - *Guidance on Oil and Gas Disclosure* (“CSA Staff Notice 51-327 (Revised)”), § 2(a)(1)(B) (revised December 29, 2011).

<sup>7</sup> TSXV Corporate Finance Policies, Policy 3.3 § Scope of Policy; *see also* CSA Staff Notice 51-327 (Revised), § 2 (“To protect investors and foster fair and efficient capital markets, Canadian securities legislation is designed to provide the investing public with timely, useful and reliable information from reporting issuers.”).

<sup>8</sup> National Instrument 51-102, *Continuous Disclosure Obligations*, § 7.1(1); *see also* National Policy 51-201, *Disclosure Standards*, § 2.1(1); TSXV Corporate Finance Policies, Policy 3.3 § 3.1 (“An Issuer must disclose Material Information concerning its business and

disclosure obligation by issuing and filing a news release and filing a material change report; it is not satisfied merely by including information in an Oil and Gas Issuer's annual statement of reserves data filed under NI 51-101 or issuing a news release alone.”<sup>9</sup>

Issuers may not pick and choose what material information to disclose. “Announcements of material information should be factual and balanced, neither over-emphasizing favourable news nor under-emphasizing unfavourable news. Material unfavourable news must be disclosed just as promptly and completely as material favourable news.”<sup>10</sup> “Companies that disclose positive news but withhold negative news could find their disclosure practices subject to scrutiny by securities regulators.”<sup>11</sup> Moreover, “news releases must contain sufficient detail to enable investors and media personnel to appreciate the true substance and importance of the information so that investors may make informed investment decisions. The guiding principle should be to communicate clearly and accurately the nature of the information, without including unnecessary details, exaggerated reports or editorial commentary designed to colour the investment community's perception of the announcement one way or another.”<sup>12</sup> Ultimately, “[t]he responsibility for the adequacy and accuracy of the content of news releases rests with the directors of an Issuer.”<sup>13</sup>

Under the “market impact” test,<sup>14</sup> a “material change” is defined as “a change in the business, operations or capital of the issuer that would reasonably be expected to have a significant effect on the market price or value of any of the securities of the issuer.”<sup>15</sup> Although the test is based on a number of factors, “if there is any doubt about whether particular information is material,” companies should “err on the side of materiality and release information publicly.”<sup>16</sup>

The Canadian Securities Administrators (CSA) provides a non-exhaustive list of categories and types of events and information which may be material, including the following:<sup>17</sup>

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affairs immediately after management of the Issuer becomes aware of the existence of Material Information, or in the case of information previously known, upon it becoming apparent that the information is material.”).

<sup>9</sup> CSA Staff Notice 51-327 (Revised), § 2(a)(1)(B); TSXV Corporate Finance Policies, 3.3 § 2.1 (“Material Change” and “Material Fact” have “the same meaning as found in applicable Securities Laws.”).

<sup>10</sup> TSXV Corporate Finance Policies, Policy 3.3 § 8.1; National Policy 51-201 *Disclosure Standards*, § 2.1(2).

<sup>11</sup> National Policy 51-201, *Disclosure Standards*, § 2.1(2).

<sup>12</sup> TSXV Corporate Finance Policies, Policy 3.3 § 8.2.

<sup>13</sup> *Id.* § 8.3.

<sup>14</sup> National Policy 51-201, *Disclosure Standards*, § 4.1(1).

<sup>15</sup> *Id.* § 2.1(1) n.1; TSXV Corporate Finance Policies, Policy 3.3 § 2.1 (“‘Material Information’ is any information relating to the business and affairs of an Issuer that results in or would reasonably be expected to result in a significant change in the market price or value of any of the Issuer's Listed Shares, and includes Material Facts and Material Changes.”).

<sup>16</sup> National Policy 51-201, *Disclosure Standards*, § 4.2(2).

<sup>17</sup> *Id.* § 4.3.

- Changes in financial results, such as:
  - a significant increase or decrease in near-term earnings prospects; and
  - changes in the value or composition of the company's assets;
- Changes in business operations, such as:
  - any development that affects the company's resources, technology, products or markets;
  - a significant change in capital investment plans or corporate objectives; and
  - significant new contracts, products, patents, or services or significant losses of contracts or business; and
- Acquisitions and dispositions, such as significant acquisitions or dispositions of assets, property or joint venture interests.

In addition to the above, the TSX Venture Exchange Corporate Finance Manual enumerates a non-exhaustive list of changes that “are deemed to be material in nature and require immediate disclosure,” including, *inter alia*:<sup>18</sup>

- a significant change in capital investment plans or corporate objectives;
- the results of any asset or property development, discovery or exploration by a Mining or Oil and Gas Issuer, whether positive or negative; and
- any other developments relating to the business and affairs of the Issuer that would reasonably be expected to significantly affect the market price or value of any of the Issuer's securities or that would reasonably be expected to have a significant influence on a reasonable investor's investment decisions.

## **B. Securities Law Prohibits Misrepresentation**

“Among the broad prohibitions of Canadian securities legislation is the ban on misrepresentations—that is (broadly speaking), false, untrue or misleading statements (or omissions from statements) of facts that are material in the sense of being reasonably likely to significantly affect the market price or value of a security.”<sup>19</sup> Like the definition of “material change,” the definition of “material fact” is based on the market impact test.<sup>20</sup>

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<sup>18</sup> See, e.g., TSX Policy 3.3 § 3.8(l), (r), (y).

<sup>19</sup> CSA Staff Notice 51-327 (Revised), § 2(a)(1)(A).

<sup>20</sup> National Policy 51-201, *Disclosure Standards*, § 4.1(1); see also TSXV Corporate Finance Policies, Policy 3.3 § 2.1 (“‘Material Fact’ has the same meaning as found in applicable Securities Laws.”).

“The Directors and Senior Officers of an Issuer must not publish or direct the publication of any information that would constitute a misrepresentation under applicable Securities Laws, including any untrue statement of a Material Fact or an omission to state a Material Fact that is necessary to be stated for a statement not to be misleading.”<sup>21</sup> Additionally, “[t]he Directors and Senior Officers must not knowingly permit any employee or consultant to publish any information that would constitute a misrepresentation and should ensure that the Issuer has implemented adequate procedures to prevent dissemination of such material.”<sup>22</sup>

### **III. Relevant Facts**

#### **A. Prior to September 18, 2020, ReconAfrica Emphasized Unconventional Oil and Gas Opportunities**

Prior to September 18, 2020, ReconAfrica used the phrases “unconventional” and “shale” to describe the resources that were the primary focus of its operations.<sup>23</sup> It is commonly understood that exploiting resources identified as “unconventional” or “shale” requires hydraulic fracturing.<sup>24</sup> A number of the Company’s early public materials and filings stated that “[t]he primary objective

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<sup>21</sup> TSXV Corporate Finance Policies, Policy 3.1 § 9.3.

<sup>22</sup> *Id.*

<sup>23</sup> See, e.g., ReconAfrica, Investor Presentation dated May 2019 (“May 2019 Investor Presentation”) [Exh. 1], at A-014 (“Targeting equivalent source rock as Shell’s Whitehill Permian marine shale play in South Africa”); *infra*, notes 25-26 (sources stating that the main target of the initial drilling program is “the Permian marine shales”), 29 (citing use of the following language in ReconAfrica’s Final EIA Report, AIF for 2019, and Kavango Basin Operations webpage: “targeting equivalent rocks to the hydrocarbon prone **unconventional** deposits within the Karoo Group of the main Karoo Basin in South Africa” (emphasis added)). See also *supra*, note 4 (defining “unconventional resource” to include shale and “conventional reservoir” as distinguishing itself from unconventional resources and shale).

<sup>24</sup> See, e.g., Government of Canada, Natural Resources Canada, *Geology of Shale and Tight Resources*, (date modified: September 2, 2020), <https://www.nrcan.gc.ca/our-natural-resources/energy-sources-distribution/clean-fossil-fuels/natural-gas/shale-tight-resources-canada/geology-shale-and-tight-resources/17675> (“Shale and tight resources are essentially the same kind of oil and natural gas as their conventional counterparts. They are ‘unconventional’ simply because of the methods used in their extraction, and the types of reservoir from which they are produced . . . . [T]he average permeability of tight and shale reservoirs is usually too small to allow commercial production unless unconventional extraction techniques (horizontal drilling and hydraulic fracturing) are used.”); BC MNGD & MRH, [Conventional versus Unconventional Oil and Gas](#); National Instrument 51-101, *Standards of Disclosure for Oil and Gas Activities* (as amended by BC Reg 122/2015), § 1.1 (defining “shale gas” as “usually requir[ing] the use of hydraulic fracturing to achieve economic production rates”); Renaissance Oil Corp.’s (Renaissance), Frequently Asked Questions webpage on October 24, 2020, <https://web.archive.org/web/20201024024919/http://renaissanceoil.com/frequently-asked-questions/> (answering the question “What is shale gas?” by stating that it requires “advanced technologies to drill and stimulate (fracture) the gas bearing zones” and that “[t]he creation of fractures within the reservoir is critical”). Please note that, as of July 27, 2021, ReconAfrica acquired Renaissance. See ReconAfrica, July 27, 2021 News Release filed on SEDAR.

of the initial multi well drilling program is to establish an active petroleum system, of which *the main target is the Permian marine shales*.”<sup>25</sup> Additionally, in its Annual Information Form (“AIF”) for 2019, ReconAfrica explained: “The primary objective of ReconAfrica’s initial three well drilling program, scheduled for the fourth quarter of 2020, is to confirm a thick, active, petroleum system throughout the Kavango Basin. Specifically, the wells will be designed to test *organic rich shales* and more shallow conventional structures through the sedimentary basin.”<sup>26</sup>

ReconAfrica personnel also publicly explained that the Company was targeting shale. In an interview on September 16, 2020, Nick Steinsberger, ReconAfrica’s Senior Vice President, Drilling and Completions said that the Company is “looking for the next American shale boom, and Africa’s got the most potential. . . . Everything is there that [ReconAfrica] need[s] to have a highly productive shale.”<sup>27</sup>

In its public materials, ReconAfrica emphasized unconventional resources/shale plays by (1) analogizing the Kavango Basin to other shale basins, (2) referencing estimates of its prospective resources that include unconventional resources, (3) including unconventional/shale resources in charts and other visuals used in its materials, and (4) describing its team’s expertise in unconventional/shale resources.

#### 1. ReconAfrica’s materials analogized the Kavango Basin to other shale basins

ReconAfrica repeatedly and explicitly analogized the Kavango Basin to other unconventional plays, including those in Texas and South Africa. For example, ReconAfrica likened its license area to shale plays in Texas.<sup>28</sup> It also drew analogies to unconventional plays in southern Africa. In its Final Environmental Impact Assessment (“EIA”) Report for its initial exploration drilling

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<sup>25</sup> See the following SEDAR filings by ReconAfrica: October 7, 2019 News Release filed on SEDAR (emphasis added); Management Discussion and Analysis (MD&A) For The Year Ended December 31, 2019, filed on SEDAR on April 28, 2020, at 2 (same language); MD&A For The Three Months Ended March 31, 2020, filed on SEDAR on May 29, 2020, at 2 (same language); MD&A For The Six Months Ended June 30, 2020, filed on SEDAR on August 25, 2020 (“August 25, 2020 MD&A”), at 2 (same language). Cf. *id.* (each stating: “The *secondary objective* is the evaluation of *conventional* hydrocarbon bearing stratigraphy” (emphases added)); February 4, 2020 News Release filed on SEDAR (“*Secondary objectives* [of ReconAfrica’s initial three well program] are to assess oil and gas prone *conventional targets*.” (emphases added)).

<sup>26</sup> AIF for 2019, at 12 (emphasis added).

<sup>27</sup> James Stafford, *The World’s Last Great Oilfield: An Interview With Nick Steinsberger*, OilPrice.com (September 16, 2020), <https://oilprice.com/Interviews/The-Worlds-Last-Great-Oilfield-An-Interview-With-Nick-Steinsberger.html> (“September 16, 2020 Interview with Nick Steinsberger, ReconAfrica’s Senior Vice President, Drilling and Completions”) (“[The Barnett Shale] is indeed where modern-day fracking began. Now, I’m hoping for something just as exciting in Namibia’s Kavango Basin.”).

<sup>28</sup> See, e.g., Revised AIF for 2020, at 8; AIF for 2019, at 8; [September 16, 2020 Interview with Nick Steinsberger, ReconAfrica’s Senior Vice President, Drilling and Completions](#) (“The Permian basin in Texas is the same type of sedimentary basin with a huge amount of Permian shale in it. . . . We are very excited about the Permian shales.”).



(“Final EIA Report”), its AIF for 2019 filed on SEDAR on July 28, 2020, and the Kavango Basin Operations page of its website, the Company stated that it was “targeting equivalent rocks to the hydrocarbon prone *unconventional* deposits within the Karoo Group of the main Karoo Basin in South Africa.”<sup>29</sup>

For example, the Company’s AIF for 2019, summarizing its Final EIA Report, states that ReconAfrica

is targeting *equivalent rocks to the hydrocarbon-prone unconventional deposits within the Karoo Group of the Main Karoo Basin in South Africa*. The main producing formations within the Main Karoo Basin are the *Prince Albert, Whitehill* and Collingham, and all of the Lower Ecca Group. The *Prince Albert Formation* within the Karoo Basin of South Africa is composed of mudstones with *shales* and some small sandstone units. The overlying *Whitehill Formation* is comprised of fine-grained, finely laminated black organic rich *shale*. The *shales* contain dolomite lenses near the base. The Collingham Formation is comprised of dark grey mudstones, intercalated with thin yellow clay-like layers of ashfall tuff. At the top of the formation, the mudstone grades into sandstone. The Company has interpreted high-resolution aero-magnetic data documenting a very deep untested sub-basin (Kavango) with optimal conditions for preserving a thick interval of *organic rich marine shales* in the lower portion of the Karoo Super Group.<sup>30</sup>

ReconAfrica often cited the Whitehill Formation, referenced above, as an analog to the Kavango Basin. For example, the Company analogized to Whitehill in its Final EIA Report, AIF for 2019, and website,<sup>31</sup> as well as its investor presentations<sup>32</sup> and technical briefs.<sup>33</sup> In a number of those

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<sup>29</sup> See Reconnaissance Energy Namibia (Pty) Ltd Final EIA Report dated June 2019 (“Final EIA Report”) [Exh. 2], at A-081; AIF for 2019, at 22; ReconAfrica’s Kavango Basin Operations webpage on September 8, 2019, <https://web.archive.org/web/20190908020539/http://recon africa.com/operations>; ReconAfrica’s Kavango Basin Operations webpage on September 19, 2020, <https://web.archive.org/web/20200919132216/https://recon africa.com/operations/kavango-basin/>.

<sup>30</sup> AIF for 2019, at 22 (emphases added) (citing Final EIA Report [Exh. 2], at A-055, 082).

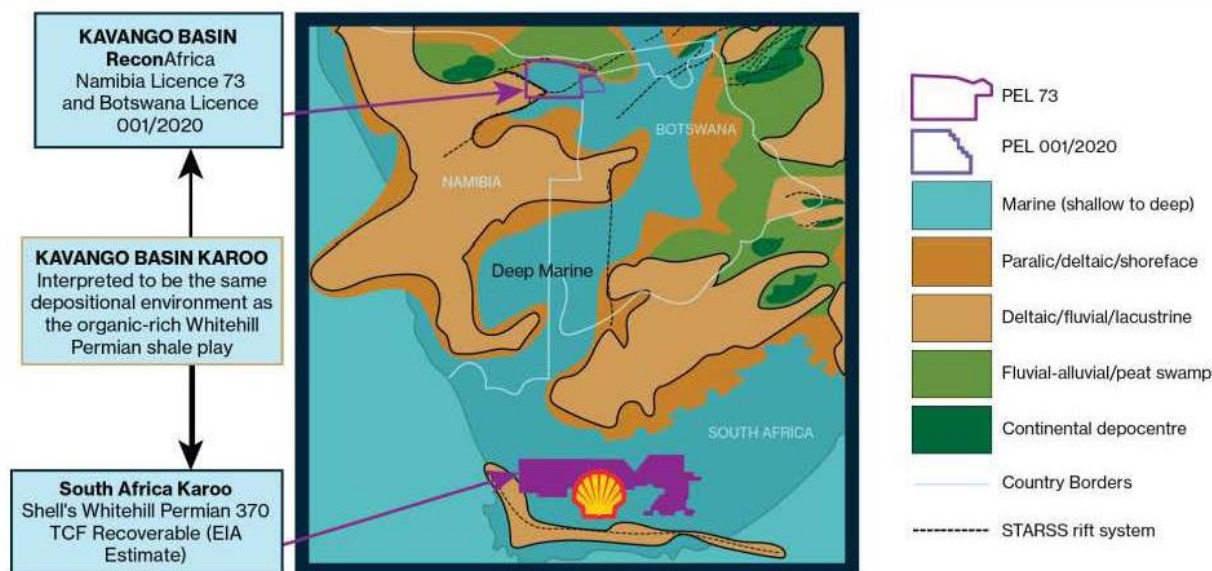
<sup>31</sup> Final EIA Report, [Exh. 2], at A-081; AIF for 2019, at 34; ; .

<sup>32</sup> See May 2019 Investor Presentation [Exh. 1], at A-005, A-014 (“Targeting equivalent source rock as Shell’s Whitehill Permian marine shale play in South Africa”).

<sup>33</sup> See Kavango Basin Technical Brief V19 on ReconAfrica’s website on July 29, 2021, <https://web.archive.org/web/20210729141041/https://recon africa.com/wp-content/uploads/ReconAfrica-Technical-Brief-V19.pdf> (“Technical Brief V19”), at 2 (“This ST-1 hydrocarbon source sequence correlates directly to the Permian Whitehill formation in the Main Karoo Basin in South Africa”); Kavango Basin Technical Brief V25 on ReconAfrica’s website on July 29, 2021, <https://web.archive.org/web/20210729141047/https://recon africa.com/wp-content/uploads/ReconAfrica-Technical-Brief-V25.pdf> (“Technical Brief V25”), at 2 (same



analogies, the company used the following graphic:<sup>34</sup>



Sources:

- 1) Permian Paleogeographic Map provided by Dr. Ansgar Wanke
- 2) Source of Whitehill Permian risked, technically recoverable shale gas resource estimate contained in report of the US Energy Information Administration dated September 2015 entitled "Technically Recoverable Shale Oil and Shale Gas Resources: South Africa". See Analogous Information Advisory in Appendix A-2

language). Please note that because the technical briefs are all undated, they are herein referred to by their version number, which can be seen in their URL.

<sup>34</sup> See, e.g., ReconAfrica, Investor Presentation dated August 4, 2020 ("August 2020 Investor Presentation"), filed as "Marketing Materials" on SEDAR, at 12; AIF for 2019, at 34 (stating, in text accompanying the graphic, "[t]his indicates that the Kavango Basin may be continuous with the Permian unconventional formations of the Main Karoo Basin in South Africa," and presenting an additional graphic that shows both the ST-1 well and ReconAfrica's "First Well" being drilled through "Permian Shales"). For a full-page sized version of the graphic reproduced above in this submission, see Graphic App'x Exh. 1, at GA-001. The graphic includes a caption stating: "Shell's Whitehill Permian 370 TCF [trillion cubic feet] Recoverable (EIA Estimate)." In the text below the graphic, ReconAfrica identifies the source of this "Whitehill Permian risked, technically recoverable *shale gas* resource estimate" as a September 2015 report by the US Energy Information Administration, "Technically Recoverable Shale Oil and Shale Gas Resources: South Africa." The referenced EIA report, included in the exhibits appended to this submission ("US EIA 2015 Shale Report" [Exh. 3]), states that the "Shale Gas Reservoir Properties and Resources of the Karoo Basin" is the "primary shale formation addressed [in its] assessment," and comprises the Prince Albert, Whitehill, and Collingham "Shale Formation[s]." See US EIA 2015 Shale Report, Exh. 3 in App'x, at A-128 (XIX-2) ("We estimate that the *Lower Permian Eccca Group shales in this basin contain 1,559 Tcf of risked shale gas in-place, with 370 Tcf as the risked, technically recoverable shale gas resource.*" (emphases added)).

## 2. Estimates of prospective resources included unconventional resources

ReconAfrica obtained estimates of the prospective resources in its license areas that focused on or included unconventional resources. ReconAfrica hired Sproule International Limited (“Sproule”), a qualified reserves evaluator, to prepare reports estimating prospective resources in ReconAfrica’s licence areas. Sproule prepared reports in 2018 and on July 18, 2020, both of which were based entirely on unconventional resources.<sup>35</sup> For example, the 2020 Sproule Report, titled “Estimation of Prospective Resources of Reconnaissance Energy Africa Ltd. in Botswana and Namibia (as of June 30, 2020),” filed on SEDAR on July 27, 2020, and the Company’s AIF for 2019, filed on SEDAR on July 28, 2020, state that “the undiscovered petroleum initially-in-place and prospective resources included in the 2020 Sproule Report represent the **unconventional (tight gas, shale gas and tight oil) resources** on the Company’s lands and **do not include potential conventional prospective resources**.”<sup>36</sup> ReconAfrica did not engage any other “independent evaluator to review resources, reserves or associated future net reserves.”<sup>37</sup> ReconAfrica appears to have relied on the 2018 and 2020 Sproule Reports in its investor presentations, noting that the analyses only addressed unconventional resources/shale.<sup>38</sup>

In addition, sometime prior to September 2020, ReconAfrica’s geologist, Daniel Jarvie (“Jarvie”), prepared a geochemical analysis titled “Petroleum Potential for Kavango Basin,” in which he estimated petroleum generation for both conventional and unconventional resources.<sup>39</sup> In its

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<sup>35</sup> Sproule, *Estimation of the Prospective Resources of Reconnaissance Energy Africa Ltd. in Botswana and Namibia* (as of June 30, 2020) (“2020 Sproule Report”), filed as an “Other” document on SEDAR, on July 27, 2020, at Summary – Page 2 (stating that the estimates of Petroleum Initially-In-Place for the Namibia asset are unchanged from those estimated in the 2018 Sproule Report). The 2018 Sproule Report is not readily available online.

<sup>36</sup> AIF for 2019, at 23 (emphases added) (citing 2020 Sproule Report, at Summary – Pages 1, 2).

<sup>37</sup> See AIF for 2019, at 22; see also ReconAfrica, AIF for the Financial Year Ended December 31, 2020, filed on SEDAR on April 30, 2021 (“Initial AIF for 2020”), at 22 (“Other than Sproule, the Company has not presently engaged an independent evaluator to review resources, reserves or associated future net reserves.”).

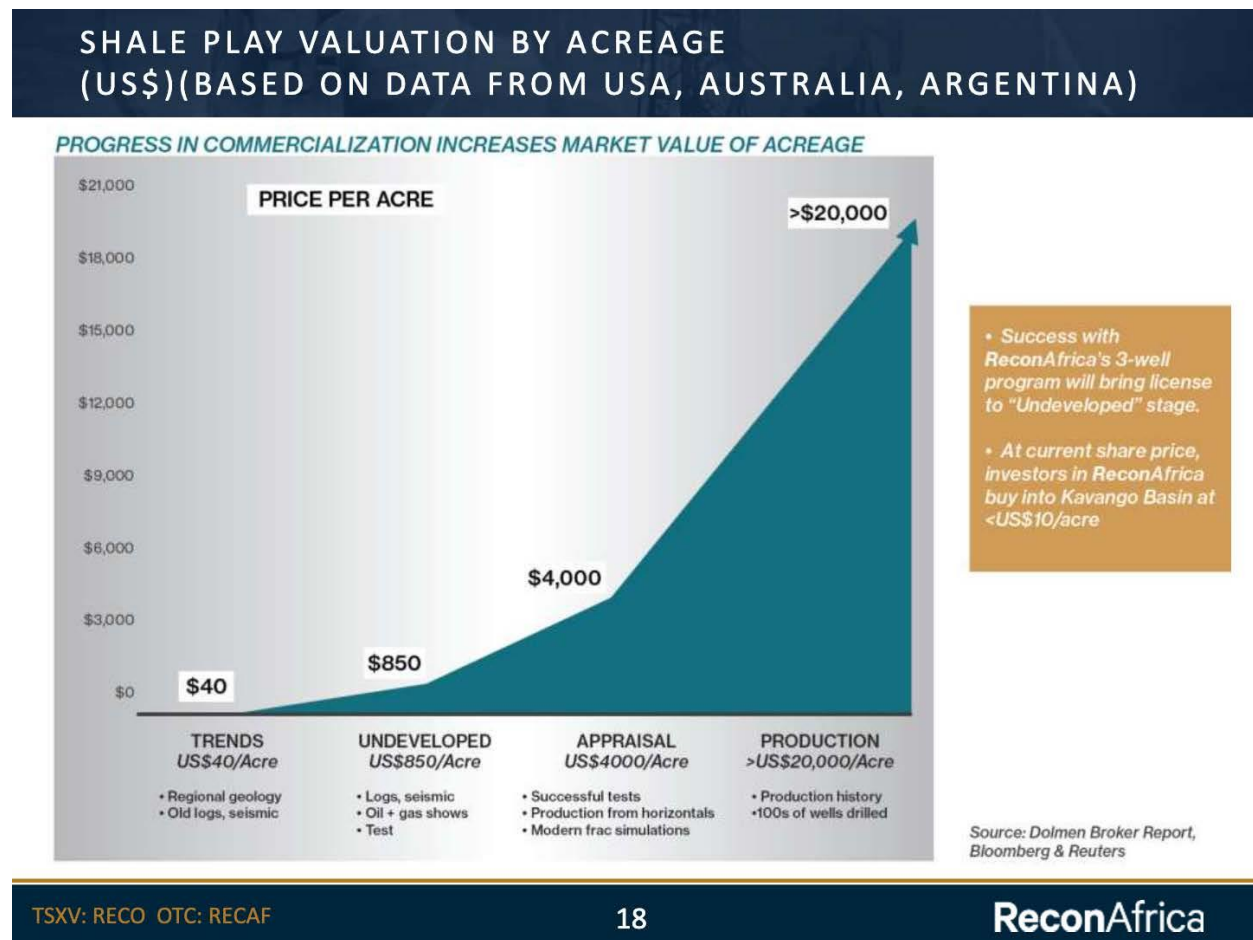
<sup>38</sup> See, e.g., May 2019 Investor Presentation [Exh. 1], at A-003, 007, 014 (“shales only”); August 2020 Investor Presentation, at 8 (“Sproule has provided an updated Undiscovered Oil Initially in Place Analysis for the **Unconventional Resources**, effective June 30, 2020” (emphasis added)); ReconAfrica Investor Presentation dated September 2020 (“September 2020 Investor Presentation”) [Exh. 4], at A-148 (“Sproule – 18.2 Billion barrels OOIP for **only the Unconventional Resources**, June 30/20” (emphasis added)).

<sup>39</sup> Daniel Jarvie, *Petroleum Potential for Kavango Basin*, on ReconAfrica’s website on September 2, 2020, <https://web.archive.org/web/20200902030107/https://reconafrica.com/wp-content/uploads/ReconAfrica-Postulated-Petroleum-Yields-V2.pdf> (“Original Jarvie Geochemical Analysis”); see also September 2020 Investor Presentation [Exh. 4], at A-154, 160 (citing *id.*). This document is referred to as a “Geochemical Analysis” herein because, after September 2020, that is how it was labeled on ReconAfrica’s website, as seen in its URL at that time. See Geochemical Analysis on ReconAfrica’s website on December 23, 2020, <https://web.archive.org/web/20201223062446/https://reconafrica.com/wp-content/uploads/Dan-Jarvie-ReconAfrica-Geochemical-Analysis-1.pdf>.

September 2020 Investor Presentation, ReconAfrica cited Jarvie’s estimate and labeled the chart “Estimated Petroleum Generation: Conventional & Unconventional.”<sup>40</sup>

### 3. Charts and visuals depicted unconventional/shale resources

ReconAfrica’s pitch to investors included the following chart, titled “Shale Play Valuation by Acreage,” which showed how the price per acre would increase exponentially in each stage of ReconAfrica’s operation.<sup>41</sup>



The chart indicates, at the top, that “Progress in Commercialization Increases Market Value of Acreage.” The chart translates the then-current share price into a price per acre, showing how much upside there was in ReconAfrica’s “shale play.” For example, according to the graphic, “[a]t current share price, investors in ReconAfrica [could] buy into Kavango Basin at <\$10/acre.” By the third stage (“Appraisal”), there would be “production from horizontals” and “modern frac s[t]imulations,” increasing the “shale play valuation” to US \$4,000 per acre, over a 40,000%

<sup>40</sup> September 2020 Investor Presentation [Exh. 4], at A-154.

<sup>41</sup> ReconAfrica, Investor Presentation dated July 2020 (“July 2020 Investor Presentation”) [Exh. 5], at A-180; [Technical Brief V25](#), at 5; Exh. 6, at A-183 (a full-page-sized version of this graphic); *see also* May 2019 Investor Presentation [Exh. 1], at A-014 (similar chart).



increase. By the final stage (“Production”), there would be “100s of wells drilled” and a “shale play valuation” of over \$20,000 per acre, over a 200,000% increase. As such, the chart ties the market value of the acreage to fracking, described as “modern frac s[t]imulations” and “production from horizontals.”

ReconAfrica’s drilling plans were projected in the following play concept map, which ReconAfrica presented to potential investors:<sup>42</sup>

## DEEP KAVANGO BASIN

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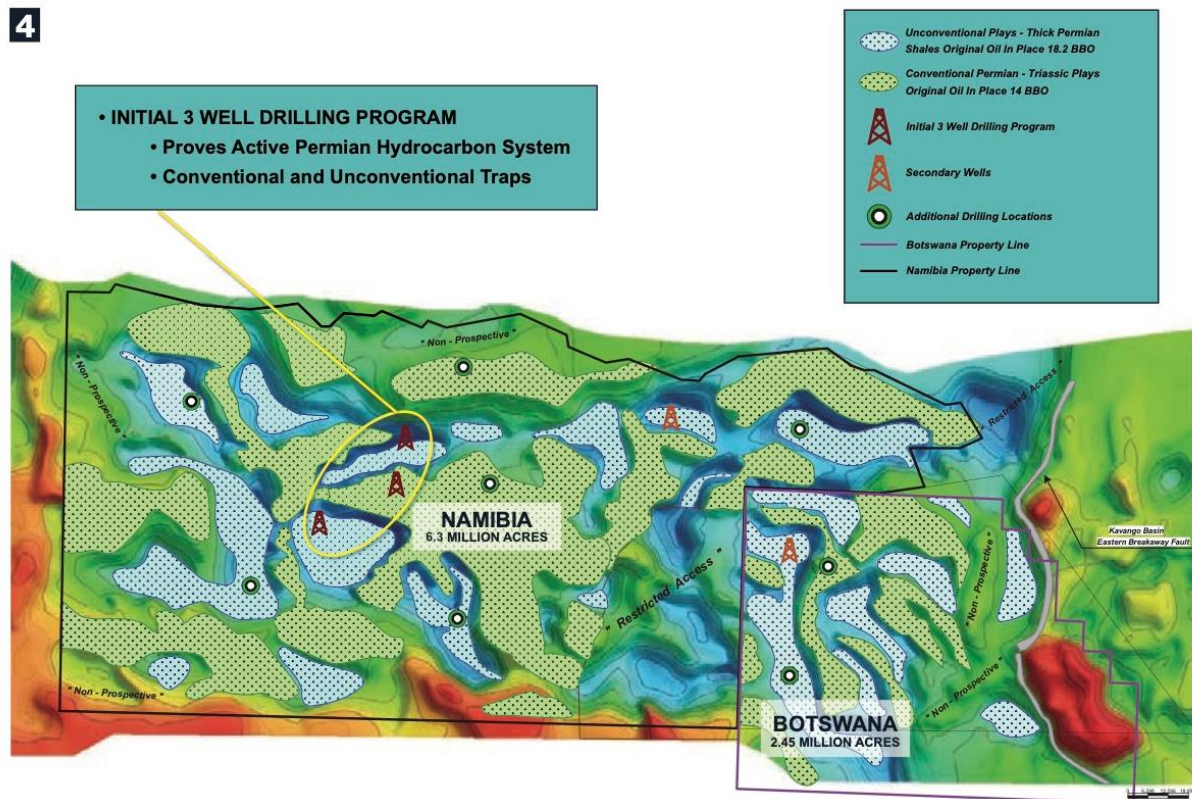


FIG 04: Play Map / Deep Kavango Basin. Includes all initial, secondary and additional drilling locations.

The light blue shaded areas are marked as “Unconventional Plays – Thick Permian Shales.”<sup>43</sup> In its AIF for 2019, ReconAfrica explained, “[t]he areas of blue shading have high prospectivity for

<sup>42</sup> See, e.g., AIF for 2019, at 35-36; [Technical Brief V25](#), at 4; September 2020 Investor Presentation [Exh. 4], at A-155; see also Graphic App’x Exh. 2, at GA-003 (full-page-sized version of this graphic).

<sup>43</sup> The reference in the map to “18.2 BBO” is the same amount of unconventional resources that the Company has attributed to the 2020 Sproule Report. See September 2020 Investor Presentation [Exh. 4], at A-148 (“Sproule – 18.2 Billion barrels OOIP for *only the Unconventional Resources*, June 30/20” (emphasis added)).

hydrocarbon *source rocks/unconventional resources*.”<sup>44</sup> (The “blue shading” appears as light blue dotted areas in the above map.) By contrast, ReconAfrica explained that “[t]he areas in yellow are deemed prospective for *conventional* hydrocarbon trapping.”<sup>45</sup> (The “yellow” areas appear as light green dotted areas in the above map.) The “yellow” areas are marked on the above map as “Conventional Permian – Triassic Plays.” Two of the wells in the “Initial 3 Well Drilling Program” are in the blue shaded areas designated as “Unconventional Plays – Thick Permian Shales,” as are both “Secondary Wells,” and four of seven “Additional Drilling Locations.”<sup>46</sup>

#### 4. The Company highlighted its expertise in unconventional resources

Prior to September 18, 2020, ReconAfrica hired several experts in unconventional resources for high-level positions. On November 4, 2019, ReconAfrica’s current CEO, Scot Evans (“Evans”), joined ReconAfrica. In the News Release announcing his hire, Evans is referred to as “an expert in developing *unconventional resources*,” and ReconAfrica’s then-CEO, Jay Park (“Park”), proclaimed that Evans’ “vast experience *in unconventional* and conventional resources along with his depth of knowledge in latest industry technologies will prove to be a major asset to the Company.”<sup>47</sup> Evans was appointed as COO of ReconAfrica on April 29, 2020.<sup>48</sup> At the time, Evans said, “I intend to bring the technical and operational experience in both conventional *and unconventional plays* that I have gained during my career to the company and its investors.”<sup>49</sup> Evans was promoted to CEO of ReconAfrica as of August 24, 2020,<sup>50</sup> and remains in that position.<sup>51</sup>

On June 25, 2020, ReconAfrica hired Nick Steinsberger (“Steinsberger”) as Senior Vice President, Drilling and Completions, responsible for the management of the drilling and completion of the initial drilling program.<sup>52</sup> Evans described him as “the pioneer of ‘slick water fracs,’” a designation

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<sup>44</sup> AIF for 2019, at 35 (emphasis added).

<sup>45</sup> *Id.* (emphasis added).

<sup>46</sup> See *supra*, note 42; see also [September 16, 2020 Interview with Nick Steinsberger, ReconAfrica’s Senior Vice President, Drilling and Completions](#) (“The geologists chose the first site on an edge of the basin that is being uplifted. There should be traps with potential conventional plays as well as some deeper shales. The second well is a straight shale test, drilled through the shale section to see what’s there. The third well will be in a different area but similar to the first—some potential traps, potential conventional targets, and shale again.”).

<sup>47</sup> See ReconAfrica, October 31, 2019 News Release filed on SEDAR (emphases added).

<sup>48</sup> See AIF for 2019, at 11.

<sup>49</sup> See ReconAfrica, April 30, 2020 News Release filed on SEDAR (emphasis added); see also [Technical Brief V25](#), at 6 (listing Mr. Evans as COO and stating “He is an expert in developing unconventional resources.”); ReconAfrica’s Directors & Officers webpage on August 14, 2020, <https://web.archive.org/web/20200814192808/https://reconafrika.com/about/directors-and-officers/> (same language).

<sup>50</sup> See ReconAfrica, August 25, 2020 News Release filed on SEDAR.

<sup>51</sup> See ReconAfrica’s Directors & Officers webpage on September 13, 2021, <https://web.archive.org/web/20210913173950/https://reconafrika.com/about/directors-and-officers/>.

<sup>52</sup> See ReconAfrica, June 25, 2020 News Release filed on SEDAR.

ReconAfrica continued to use thereafter.<sup>53</sup> Steinsberger was “responsible for the first slickwater stimulation in the Barnett Shale in 1997, what is referred to as the first modern shale frac” and helped turn the “Barnett Shale into the industry’s first commercial shale play.”<sup>54</sup> In fact, Steinsberger stated himself that the Barnett Shale “is indeed where modern-day fracking began” and that he was “hoping for something just as exciting in Namibia’s Kavango Basin.”<sup>55</sup> Beyond that, Steinsberger “was responsible for completing the first 30 horizontal wells in any shale formation,” “has been involved in over 600 horizontal shale wells,” and “has authored many technical papers on completion techniques in shales and has been written about in several, the most well-known being ‘The Frackers.’”<sup>56</sup> In its AIF for 2019, filed on SEDAR on July 28, 2020, ReconAfrica stated that Steinsberger was “working with ReconAfrica on their Namibia Licence to drill and test their block for conventional *and unconventional targets*.”<sup>57</sup>

ReconAfrica also highlighted its technical team’s experience with unconventional resources. For example, the credentials of ReconAfrica’s geochemist, Jarvie, heavily focused on unconventional plays and shale. Jarvie’s biography, as it appeared in materials published by ReconAfrica prior to September 18, 2020, emphasized his expertise regarding shale plays: “Most notably, he completed the geochemical analysis for Mitchell Energy, in their development of the *Barnett Shale*. . . Jarvie is the retired Chief Geochemist for EOG Resources, Inc., the largest producer of *shale oil resource plays* in North America. He is the President of Worldwide Geochemistry, LLC, working as a consultant to industry, *focused on unconventional shale resource plays and prospects*, and has also established a research lab to evaluate various aspects of *unconventional shale-gas and shale-oil petroleum systems* as well as conventional petroleum systems.”<sup>58</sup>

As Steinsberger explained, “Listen, the source rock is the shale. That’s exactly what my background is, and what Dan Jarvie’s background is. This is where our expertise lies.”<sup>59</sup>

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<sup>53</sup> See ReconAfrica, June 25, 2020 News Release filed on SEDAR; [ReconAfrica’s Directors & Officers webpage on August 14, 2020](#) (same language).

<sup>54</sup> AIF for 2019, at 60.

<sup>55</sup> [September 16, 2020 Interview with Nick Steinsberger, ReconAfrica’s Senior Vice President, Drilling and Completions](#).

<sup>56</sup> AIF for 2019, at 60.

<sup>57</sup> *Id.* (emphasis added).

<sup>58</sup> See, e.g., [Original Jarvie Geochemical Analysis on ReconAfrica’s website on September 2, 2020](#), at 1 (emphases added); September 2020 Investor Presentation [Exh. 4], at A-160 (excerpting *id.*) (emphases added); ReconAfrica’s Technical Team webpage on August 18, 2020, <https://web.archive.org/web/20200818172840/https://reconafrika.com/about/technical-team/> (emphases added); see also AIF for 2019, at 60 (referring to the Barnett Shale as “the industry’s first commercial shale play”).

<sup>59</sup> [September 16, 2020 Interview with Nick Steinsberger, ReconAfrica’s Senior Vice President, Drilling and Completions](#).

**B. On September 18, 2020, the Namibian Government, with REN, Publicly Announced that ReconAfrica does not have a Licence for the Development of Unconventional Resources**

On September 16, 2020, *The Namibian*, a local newspaper, published an article titled “Oil drills threaten Okavango ecosystem,”<sup>60</sup> which expressed concerns over what ReconAfrica’s planned project means for the environment in the region. On September 18, 2020, the Namibian Ministry of Mines and Energy (“MME”), with REN, issued a Media Release that publicly confirmed that the licence granted to ReconAfrica was not for the production of unconventional resources or fracking.<sup>61</sup> In the relevant part, MME and REN stated that ReconAfrica’s licence was issued for the purpose of exploring hydrocarbons and that the drilling program would focus on establishing “the presence of a hydrocarbon system and conventional reservoirs.”<sup>62</sup> It further stated that, as of the date of the Release, “no onshore Production Licence” had been applied for or granted and “no Licence for the development of unconventional resources (E.g., Shale gas) ha[d] ever been applied for/or granted in Namibia.”<sup>63</sup> The Release summarized as follows: “This means that on record, no hydraulic fracking activities are planned in Namibia.”<sup>64</sup>

**C. After September 18, 2020, ReconAfrica States that it is Targeting Conventional Oil and Gas and Not Fracking**

As shown below, within days of September 18, 2020, when MME issued its Media Release with REN, ReconAfrica’s description of its activities changed. ReconAfrica emphasized that it is targeting conventional resources. The vast majority of references to “unconventional” and “shale” disappeared from ReconAfrica’s website and other public materials or were exchanged for terms such as “source rock.”<sup>65</sup> Since the MME and REN Media Release, ReconAfrica has indicated that it is targeting conventional oil and gas and that it is not fracking:

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<sup>60</sup> See Jeffrey Barbee and Kerry Nash, *Oil drillers threaten Okavango ecosystem*, *The Namibian* (September 16, 2020), <https://www.namibian.com.na/204517/archive-read/Oil-drillers-threaten-Okavango-ecosystem>.

<sup>61</sup> See Media Release, Namibian MME, *Factual Response to article titled: “Oil Drillers Threaten Okavango Ecosystem”* (September 18, 2020), [http://www.mme.gov.na/files/publications/cbe\\_Media%20Release%20Recon%20PEL%2073\\_September%202020%20\(002\).pdf](http://www.mme.gov.na/files/publications/cbe_Media%20Release%20Recon%20PEL%2073_September%202020%20(002).pdf) (“provid[ing] correct information, to the article that appeared in *The Namibian* dated 16 September 2020 under the title ‘Oil drillers threaten Okavango ecosystem’”).

<sup>62</sup> *Id.* at 1.

<sup>63</sup> *Id.*

<sup>64</sup> *Id.* The Botswanan government has made similar statements. The President of Botswana has expressly stated in an interview that “[w]e do not and will not allow for fracking.” See Presidency, *President Masis on CNN*, Facebook (May 5, 2021), <https://www.facebook.com/watch/?v=292782205664499>, at 7:20.

<sup>65</sup> “While “source rock” is a generic term that could encompass either conventional or unconventional hydrocarbon resources, as noted above, ReconAfrica personnel had stated: “the source rock is the shale.” See [September 16, 2020 Interview with Nick Steinsberger](#),



- In a News Release filed October 20, 2020, ReconAfrica stated, “[t]here is no hydraulic fracturing or other stimulation in the well program, *as the targets are conventional reservoirs*.”<sup>66</sup>
- ReconAfrica’s MD&A filing on November 24, 2020, its initial AIF for 2020, and its revised AIF for 2020 all state that the Company’s targets for its initial drilling/well program are conventional reservoirs.<sup>67</sup>
- ReconAfrica’s spokesperson indicated to The Namibian on February 5, 2021, that “ReconAfrica is not fracking. *ReconAfrica’s focus is conventional oil*.”<sup>68</sup>
- ReconAfrica’s “Project Overview” Fact Sheet also states that its “exploration is focused on confirming the presence of a conventional hydrocarbon bearing system . . . .”<sup>69</sup>
- In an interview on or about April 18, 2021, ReconAfrica’s current CEO, Evans, stated that “the word ‘unconventional resources’ is *no longer* part of the vocabulary.”<sup>70</sup>

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ReconAfrica’s Senior Vice President, Drilling and Completions. Likewise, in the Original Jarvie Geochemical Analysis, one of its “Assumptions for Geochemical Calculations” is that “*Source rock was constructed to be composed of a marine shale* and terrigenous but slightly oil prone organic matter based on a total South African Karoo basin data.” Original Jarvie Geochemical Analysis on ReconAfrica’s website on September 2, 2020, at 5 (emphasis added). Additionally, ReconAfrica has used “source rocks” interchangeably with “unconventional resources,” such as in its play concept map. In that context, ReconAfrica explained that the “[t]he areas of blue shading” (marked as “*Unconventional* Plays – Thick Permian *Shales*”) have “high prospectivity for hydrocarbon *source rocks/unconventional resources*,” as opposed to “[t]he areas in yellow” (marked as “*Conventional* Permian – Triassic Plays”) which were deemed “prospective for *conventional* hydrocarbon trapping.” See *supra*, notes 42-46. See also *infra*, note 86 (comparing change from use of phrase “source shale” to “source rock” in ReconAfrica’s Technical Briefs).

<sup>66</sup> See ReconAfrica, News Release filed on SEDAR on October 20, 2020 (emphasis added); see also ReconAfrica, MD&A for the Nine Months Ended September 30, 2020, filed on SEDAR on November 24, 2020 (“November 24, 2020 MD&A”), at 2 (using the same language).

<sup>67</sup> See November 24, 2020 MD&A, at 2; Initial AIF for 2020 at 14; Revised AIF for 2020 at 14.

<sup>68</sup> Arlana Shikongo, *Wildlife fund warns against Kavango drilling*, The Namibian (February 5, 2021), <https://www.namibian.com.na/98647/read/Wildlife-fund-warns-against-Kavango-drilling> (emphasis added).

<sup>69</sup> ReconAfrica, ReconAfrica Project Overview (undated), on ReconAfrica’s website on September 13, 2021, <https://web.archive.org/web/20210913173735/https://recon africa.com/wp-content/uploads/ReconAfrica-Fact-Sheet-Overview.pdf>.

<sup>70</sup> Namibian Broadcasting Corporation, *Early oil and gas discovery onshore Namibia rules out fracking – ReconAfrica*, YouTube (April 18, 2021), [https://www.youtube.com/watch?v=O8aF-r\\_DudE](https://www.youtube.com/watch?v=O8aF-r_DudE), at 1:25 (emphasis added).

- On May 3, 2021, Steinke told CNN, “We have absolutely no intention in developing unconventional. Zero[.]”<sup>71</sup>
- Recently, in a News Release filed August 17, 2021, ReconAfrica stated: “No fracking [sic] is planned or permitted by the Government of Namibia.”<sup>72</sup>

The above statements appear to depart from ReconAfrica’s statement only months earlier: “[T]he main target [of the initial multi-well drilling program] is the Permian marine shales. The secondary objective is the evaluation of conventional hydrocarbon bearing stratigraphy.”<sup>73</sup>

As detailed below, descriptions of the targeted resources have also changed in many of ReconAfrica’s publicly shared materials since September 18, 2020.

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<sup>71</sup> David McKenzie and Ingrid Formane, *A Canadian oil firm thinks it has struck big. Some fear it could ravage a climate change hotspot*, CNN (May 3, 2021), <https://www.cnn.com/2021/05/03/africa/namibia-oil-exploration-intl-cmd/index.html>. Compare Steinke’s statement to the Initial AIF for 2020, released only days earlier, which stated (at page 39): “Depending on the success of the initial work program, the Company anticipates it will begin further **exploration and development of** conventional and **unconventional** hydrocarbons in commercial quantities or seek potential partnering opportunities to assist in its **exploration and development of** conventional and **unconventional** hydrocarbons in the Kavango Basin.” (emphases added). The Revised AIF for 2020 does **not** include the “Exploration and Development” section that contained these references to “unconventional hydrocarbons.” See Revised AIF for 2020. A shortened version of the “Exploration and Development” of the Initial AIF for 2020 now appears in the company’s Amended Form 51-101 F1, but also does not include these references to “unconventional hydrocarbons.” Statement of Reserves Data and Other Oil and Gas Information, Amended Form 51-101 F1, filed on SEDAR on May 19, 2021 (“Amended Form 51-101 F1”), at 10-12 (same language). Another part of that same Amended Form 51-101 F1, however, refers to the Kavango Basin project as “this **unconventional** play.” See Amended Form 51-101 F1, at 14 (emphasis added).

<sup>72</sup> August 17, 2021 News Release filed on SEDAR, at 1.

<sup>73</sup> August 25, 2020 MD&A at 2; see also *supra*, notes 25 (previous filings with same language), 42-43 (play concept map showing blue shaded areas marked as “**Unconventional** Plays – Thick **Permian Shales**” (emphasis added)); Graphic App’x Exh. 2, at GA-003 (full-page-sized version of the play concept map); [September 16, 2020 Interview with Nick Steinsberger, ReconAfrica’s Senior Vice President, Drilling and Completions](#) (“We are very excited about the Permian shales.”).

1. Changes were made to ReconAfrica’s website, investor presentations, and technical briefs

*Table 1: Changes to the Kavango Basin Operations page of ReconAfrica’s website between September 19 and September 22, 2020*

Location on Page	September 19, 2020 <sup>74</sup>	September 22, 2020 <sup>75</sup>
First Paragraph – Last Sentence	“The deep Kavango Basin offers both large scale conventional <i>and non-conventional</i> play types.”	“The Kavango Basin offers a thick Permian sequence that we believe will supply a huge <i>conventional oil</i> play.”
Third Paragraph – Last Sentence	“The survey and analysis confirm that the Kavango Basin reaches depths of up to 30,000 feet, under optimal conditions to preserve a thick interval of organic rich marine <i>shales</i> , <sup>76</sup> and the Company’s initial work program is designed to confirm the presence of an active petroleum system in the Kavango Basin.”	“The survey and analysis confirm that the Kavango Basin reaches depths of up to 30,000 feet, under optimal conditions to preserve a thick interval of organic rich marine <i>source rocks</i> . The Company’s initial work program is designed to confirm the presence of an active petroleum system in the Kavango Basin.”
First Paragraph Under the Heading “Regional Karoo Permian Activity”	“ReconAfrica is targeting equivalent rocks to the <i>hydrocarbon prone unconventional deposits</i> within the Karoo Group of the main Karoo Basin in South Africa.”	“ReconAfrica is targeting equivalent rocks to the <i>hydrocarbon prone deposits</i> within the Karoo Group of the main Karoo Basin in South Africa.”

<sup>74</sup> [ReconAfrica’s Kavango Basin Operations webpage on September 19, 2020](#) (emphases added in chart).

<sup>75</sup> ReconAfrica’s Kavango Basin Operations webpage on September 22, 2020, <https://web.archive.org/web/20200922054202/https://recon africa.com/operations/kavango-basin/> (emphases added in chart).

<sup>76</sup> This language is taken directly from ReconAfrica’s Final EIA Report. *See* Final EIA Report [Exh. 2], at A-055.

Location on Page	September 19, 2020 <sup>74</sup>	September 22, 2020 <sup>75</sup>
Third Paragraph Under the Heading “Regional Karoo Permian Activity”	“ReconAfrica has interpreted high resolution aero magnetic data documenting a very deep untested basin (Kavango) with optimal conditions for preserving a thick interval of organic rich marine <i>shales</i> in the lower portion of the Karoo Super Group.” <sup>77</sup>	“ReconAfrica has interpreted high resolution aero magnetic data documenting a very deep untested basin (Kavango) with optimal conditions for preserving a thick interval of organic rich marine <i>source rock</i> in the lower portion of the Karoo Super Group.”
First Paragraph Under Heading “Kavango Depth to Basement 3D Surface Showing Initial Well Locations” – Second Sentence	“The main objective is to confirm <i>organic rich shales</i> and conventional opportunities in Namibia and Botswana.”	“The main objective is to confirm an <i>active petroleum system</i> in Namibia and Botswana.”

Table 2: Changes in ReconAfrica’s investor presentations

Location in September 2020 Investor Presentation <sup>78</sup>	September 2020 Investor Presentation <sup>79</sup>	November 2020 Investor Presentation <sup>80</sup>
Page 3 – First Bullet	“8.75 MM acre conventional and <i>unconventional</i> play.”	“8.75 MM acres covers the entire basin.”

<sup>77</sup> This language is taken directly from ReconAfrica’s Final EIA Report. *See id.* at A-082.

<sup>78</sup> As noted in this table, a page was deleted from the Investor Presentation, so the September 2020 version is used as the point of reference. *See* September 2020 Investor Presentation [Exh. 4].

<sup>79</sup> *See id.* (emphases added in chart).

<sup>80</sup> *See* ReconAfrica, Investor Presentation dated November 2020 (“November 2020 Investor Presentation”), on ReconAfrica’s website on November 19, 2020, <https://web.archive.org/web/20201119193329/https://reconafrika.com/wp-content/uploads/ReconAfrica-Investor-Presentation-4.pdf> (emphases added in chart). This is the first investor presentation after the end of September 2020 that the authors have found online.

Location in September 2020 Investor Presentation <sup>78</sup>	September 2020 Investor Presentation <sup>79</sup>	November 2020 Investor Presentation <sup>80</sup>
Page 8	This is an entire page, titled, “Kavango Basin Un-Risked Resource in Place,” about unconventional resources based on the 2020 Sproule Report.	This page was deleted.
Page 9 – Second Bullet Point Under #2	“Continuous with Main Karoo Basin in SA Permian <i>Unconventional</i> ”	“Continuous with Main Karoo Basin in South African Permian”
Page 10 – Second Sentence	“The main objective is to confirm organic rich <i>shales</i> and conventional opportunities in Namibia and Botswana.”	“The main objective is to confirm organic rich <i>source rocks</i> and conventional opportunities in Namibia and Botswana.”
Page 11 – Second Bullet Point	“The Permian petroleum system has source/ <i>shale</i> rocks in the lower intervals and is modelled to be more thermally mature than the ST1 control well.”	“The Permian petroleum system has <i>source rocks</i> in the lower intervals and is modelled to be more thermally mature than the ST1 control well.”
Subtitle of Page 14, an excerpt of the Jarvie geochemical analysis	“Estimated Petroleum Generation: Conventional and <i>Unconventional</i> ” <sup>81</sup>	“Estimated Petroleum Generation” <sup>82</sup>

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<sup>81</sup> This is the title of the slide from the Original Jarvie Geochemical Analysis from which the data is taken. This modification is discussed further below. *See infra*, text accompanying notes 90-91.

<sup>82</sup> While the title to the chart no longer includes “conventional and unconventional resources,” the content of the chart remained the same. *Compare* September 2020 Investor Presentation [Exh. 4], at A-155 with [November 2020 Investor Presentation](#), at 13.

Table 3: Changes to ReconAfrica’s technical briefs

Location in Technical Brief V25 <sup>83</sup>	Technical Brief V25 <sup>84</sup>	Technical Brief V28 <sup>85</sup>
Page 1 – 4 <sup>th</sup> Bullet Point	“Same seaway or depositional environment as Shell’s 390 TCF Permian shale (top 10 <i>shale</i> plays worldwide).”	“Same seaway or depositional environment as Whitehill Permian 390 TCF Recoverable.”
Page 1 – 5 <sup>th</sup> Bullet Point	“Expecting up to 6,000’ Permian petroleum system supporting large-scale <i>unconventional</i> + conventional plays.”	“Expecting up to 6,000’ Permian petroleum system supporting large-scale <i>hydrocarbon</i> plays.”

<sup>83</sup> The pagination of the Technical Briefs differs slightly so V25 is used as the point of reference. See [Technical Brief V25](#).

<sup>84</sup> [Technical Brief V25](#) (emphases added in chart). Technical Brief V25 is undated but is from the time period during which Scot Evans was COO (April 29, 2020 – August 24, 2020), *id.* at 6 (listing Evans as COO). See *supra*, notes 48, 50 (listing dates of Evans being appointed COO and then promoted to CEO). It is the last Technical Brief currently available online from before the changes were made. See [Technical Brief V25 on ReconAfrica’s website on July 29, 2021](#).

<sup>85</sup> See Kavango Basin Technical Brief V28 on ReconAfrica’s website on September 13, 2021, <https://web.archive.org/web/20210913175752/https://reconafrika.com/wp-content/uploads/ReconAfrica-Technical-Brief-V28.pdf> (“Technical Brief V28”) (emphases added in chart). Technical Brief V28 is also undated but is from sometime on or before October 24, 2020, because that is when one could access it from the Operations webpage of ReconAfrica’s website. See ReconAfrica’s Operations webpage on October 24, 2020, <https://web.archive.org/web/20201024114638/https://reconafrika.com/operations/> (click on “Download PDF” button under “Technical Brief” heading). This appears to be the current technical brief because it is linked to on ReconAfrica’s homepage as of September 13, 2021. See ReconAfrica’s homepage on September 13, 2021, <https://web.archive.org/web/20210913175604/https://reconafrika.com/> (click on “Technical Brief,” which can be found under the “Operations” drop down in the navigation bar on the top of the page).

Location in Technical Brief V25 <sup>83</sup>	Technical Brief V25 <sup>84</sup>	Technical Brief V28 <sup>85</sup>
Page 3 – First Paragraph – Last Sentence	“ReconAfrica’s technical team has sourced, gathered and integrated all this data to better understand both <i>unconventional</i> and conventional horizons that will be targeted with the initial drilling program, intent on proving an active petroleum system capable of producing economic quantities of hydrocarbons in 2020.”	“ReconAfrica’s technical team has sourced, gathered and integrated all this data to better understand <i>the horizons</i> that will be targeted with the initial drilling program, intent on proving an active petroleum system capable of producing economic quantities of hydrocarbons in early 2021.”
Page 3 – Second Paragraph – Last Sentence	“In the Kavango Basin, the existence of this organic <i>shale</i> is proven by the ST-1 well, which is located due west of the basin.”	“In the Kavango Basin, the existence of this organic <i>source rock</i> is proven by the ST-1 well, which is located due west of the basin.” <sup>86</sup>
Page 4 – Last Sentence	“This work builds on the unconventional potential previously identified for Kavango Basin.”	This sentence was deleted.
Page 5	The “Shale Play Valuation by Acreage” chart discussed in Section III.A.(3) above, which notes “production from horizontals” and “modern frac s[t]imulations” in the Appraisal stage. <sup>87</sup>	This page was deleted.

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<sup>86</sup> Technical Brief V25 stated that “ST-1 lithology log documents the presence of approximately 620 Feet of Permian-Age *source shale*” and used a graphic (Fig 02) showing the ST-1 Well drilling through what is labeled as “620 Feet Karoo-Age Permian *Source Shale*.” See [Technical Brief V25](#), at 2 (emphases added). These were changed in Technical Brief V28 to “ST-1 lithology log documents the presence of approximately 620 Feet of Permian-Age *source rock*” and “620 Feet Karoo-Age Permian *Source Rock*,” respectively. See [Technical Brief V28](#), at 2 (emphases added).

<sup>87</sup> See *supra*, note 41.



As of September 13, 2021, the updated language, seen in the right-hand column of the above charts, is still visible on ReconAfrica's current Kavango Basin Operations page,<sup>88</sup> as well as in its technical brief.<sup>89</sup>

Similar changes to those reflected in the above tables were made to Jarvie's geochemical analysis titled "Petroleum Potential for Kavango Basin." By September 22, 2020, all references in the analysis to "unconventional" and "shale" were eliminated or changed.<sup>90</sup> However, the amounts listed as the "Estimated Petroleum Generation" (what the geochemical analysis refers to as the "Total Petroleum Generation Potential Over ReconAfrica's Kavango Basin Acreage") have remained the same; the total has not changed to exclude unconventional resources.<sup>91</sup>

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<sup>88</sup> See ReconAfrica's Kavango Basin Operations webpage on September 13, 2021, <https://web.archive.org/web/20210913175322/https://reconafrika.com/operations/kavango-basin/>.

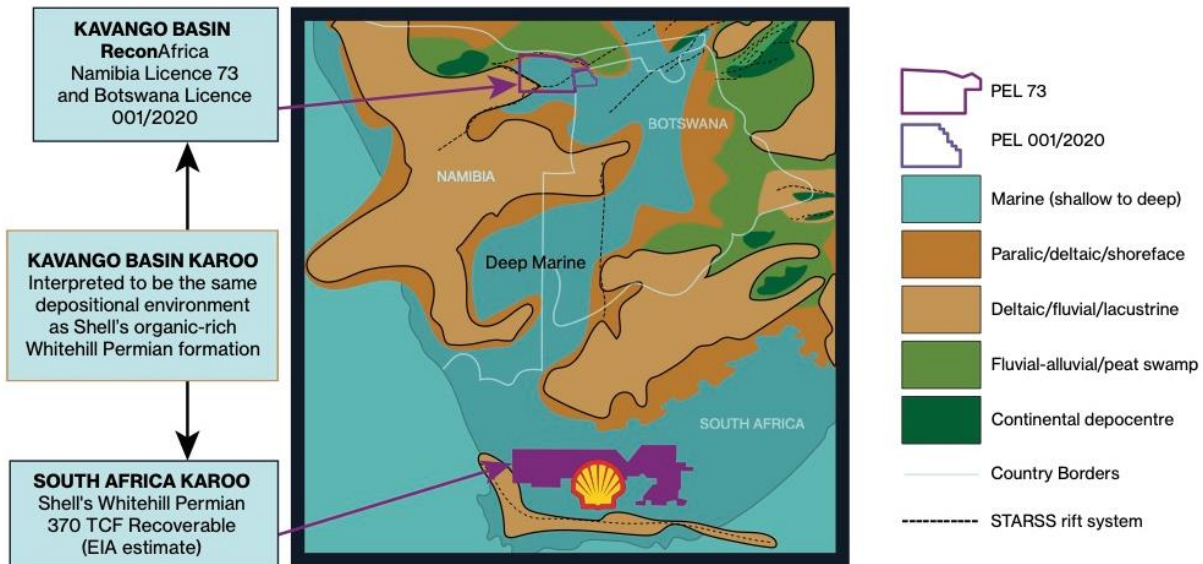
<sup>89</sup> See [Technical Brief V28](#) (most recent Technical Brief available as of September 13, 2021).

<sup>90</sup> Compare [Original Jarvie Geochemical Analysis on ReconAfrica's website on September 2, 2020](#), at 1, 3, 5, 6, 7 with Daniel Jarvie, *Petroleum Potential for Kavango Basin*, on ReconAfrica's website on December 23, 2020, <https://web.archive.org/web/20201223062446/https://reconafrika.com/wp-content/uploads/Dan-Jarvie-ReconAfrica-Geochemical-Analysis-1.pdf> ("Revised Jarvie Geochemical Analysis"), at 1, 3, 5, 6, 7. For example, under "Assumptions for Geochemical Calculations," the phrases "Source rock was constructed to be composed of a marine *shale*," "Terrigenous *shale*: TOC=2.5%," and "Marine *Shale*: TOC=5.0%" were changed to "Source rock was constructed to be composed of a marine *source rock*," "Terrigenous *source*: TOC=2.5%," and "Marine *Source*: TOC=5.0%," respectively. Compare [Original Jarvie Geochemical Analysis on ReconAfrica's website on September 2, 2020](#), at 5 (emphases added) with [Revised Jarvie Geochemical Analysis](#), at 5 (emphases added). Please note that even though the Revised Jarvie Geochemical Analysis is undated, it could be accessed by clicking "Learn More" under a quote attributed to Jarvie on ReconAfrica.com's homepage on September 22, 2020. See <https://web.archive.org/web/20200922043702/https://reconafrika.com/>.

<sup>91</sup> Compare [Original Jarvie Geochemical Analysis on ReconAfrica's website on September 2, 2020](#), at 3 with [Revised Jarvie Geochemical Analysis](#), at 3.

2. Changes were made to graphics and images used in public presentations and materials

Revisions were also made to the text on the graphics and images used in the above-mentioned Investor Presentations and Technical Briefs. For example, here is the revised version of the Regional Karoo Permian Seaway graphic cited in Section III.A.(1) above:<sup>92</sup>



The graphic is the same as before, except that the middle box now says “Whitehill Permian Formation” instead of “Whitehill Permian Shale Play.”<sup>93</sup>

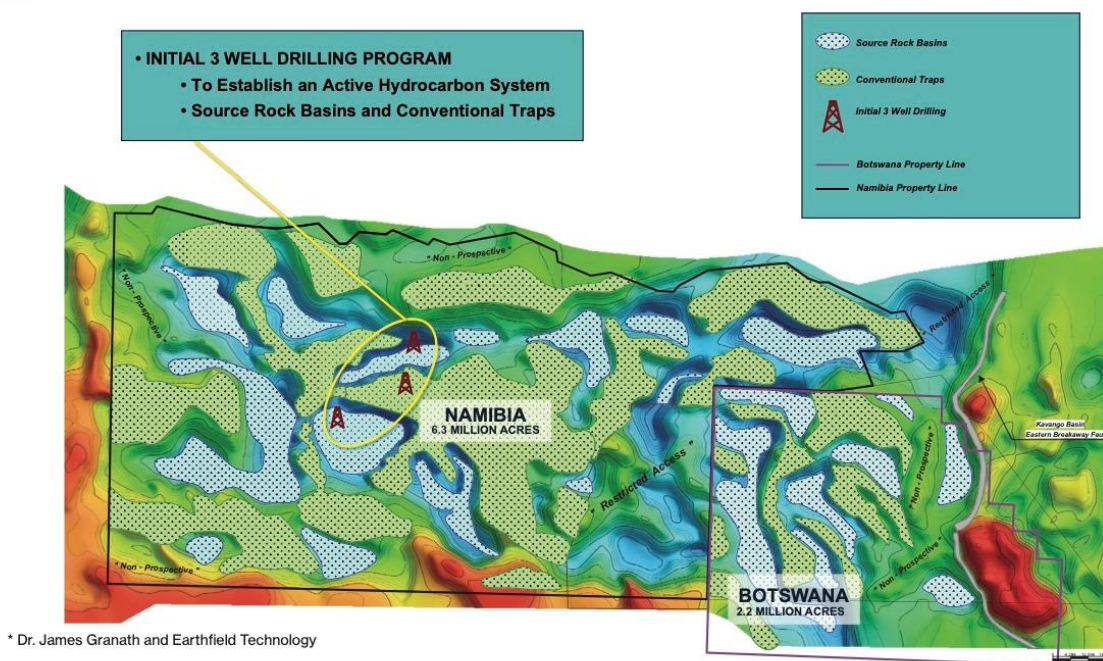
<sup>92</sup> See [November 2020 Investor Presentation](#), at 11; [Technical Brief V28](#), at 2; Graphic App’x Exh. 1, at GA-002 (full-page-sized version of this revised graphic); ReconAfrica, Investor Presentation dated June 2021 (“June 2021 Investor Presentation”) [Exh. 7], at A-207. Until as late as August 17, 2021, ReconAfrica’s “Investor Presentation” webpage directed users to the June 2021 Investor Presentation as the latest available. See June 2021 Investor Presentation on ReconAfrica’s website on August 17, 2021, <https://web.archive.org/web/20210817024719/https://reconafrika.com/wp-content/uploads/ReconAfrica-Investor-Presentation.pdf>. See also *supra*, note 34 (original version of this graphic).

<sup>93</sup> Compare September 2020 Investor Presentation [Exh. 4], at A-152 and [Technical Brief V25](#), at 2 with [November 2020 Investor Presentation](#), at 11, June 2021 Investor Presentation, Ex. 7, at A-207 and [Technical Brief V28](#), at 2. Compare also Graphic App’x Exh. 1, at GA-001 (full-page-sized version of original graphic) with Graphic App’x Exh. 1, at GA-002 (full-page-sized version of revised graphic). Additionally, the source reference to the US EIA 2015 Shale Report was removed. However, the reference to “370 TCF Recoverable” still remains. See *supra*, note 34.

ReconAfrica also revised the play concept map, cited in Section III.A.(3) above.<sup>94</sup>

**4**

## DEEP KAVANGO BASIN



**FIG 04:** Play Map / Deep Kavango Basin. Includes all initial, secondary and additional drilling locations.

In this graphic, the references to “Unconventional Plays - Thick Permian Shales” and “Unconventional Traps” were changed to “Source Rock Basins.” All of the “Secondary Wells” and “Additional Drilling Locations” were also deleted.<sup>95</sup> As of September 13, 2021, ReconAfrica continues to use these revised graphics on its website and in its promotional materials.<sup>96</sup>

<sup>94</sup> See [November 2020 Investor Presentation](#), at 14; [Technical Brief V28](#), at 5; Graphic App’x Exh. 2, at GA-004 (full-page-sized version of this revised graphic); June 2021 Investor Presentation [Exh. 7], at A-196. *See also supra*, note 42 (original version of this graphic).

<sup>95</sup> Compare September 2020 Investor Presentation [Exh. 4], at A-155, AIF for 2019, at 36, and [Technical Brief V25](#), at 4 with [November 2020 Investor Presentation](#), at 14, June 2021 Investor Presentation [Exh. 7], at A-196 and [Technical Brief V28](#), at 5; compare Graphic App’x Exh. 2, at GA-003 (full-page-sized version of original graphic) with Graphic App’x Exh. 2, at GA-004 (full-page-sized version of revised graphic).

<sup>96</sup> See, e.g., [ReconAfrica’s Kavango Basin Operations webpage on September 13, 2021](#); [Technical Brief V28](#), at 2, 4 (most recent Technical Brief available as of September 13, 2021). The Initial AIF for 2020, filed on SEDAR on April 30, 2021, used the unrevised play concept map that labeled the blue shaded areas “Unconventional Plays – Thick Permian Shales.” See Initial AIF for 2020, at 37-38. The map was removed from the Revised AIF for 2020, filed on SEDAR on May 19, 2021. See Revised AIF for 2020.

### 3. Changes were made to descriptions of Company personnel

Similar changes are evident in the published biographies of Company directors, officers, and members of the technical team and descriptions of their respective expertise. Since some time after September 18, 2020, ReconAfrica’s website and materials no longer mention the expertise of its personnel in unconventional resources. For example, the chart below shows changes to the biographies of individuals affiliated with ReconAfrica in its materials and on its website.

*Table 4: Changes to Personnel Biographies on ReconAfrica’s website*

<b>Location Before Changes</b>	<b>Before Changes<sup>97</sup></b>	<b>After Changes<sup>98</sup></b>
Scot Evans’ Bio – Last Sentence	“He is an expert in developing <i>unconventional resources</i> .”	“He is an expert in <i>new resource</i> development.” <sup>99</sup>

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<sup>97</sup> See [ReconAfrica’s Directors & Officers webpage on August 14, 2020](#) (Scot Evans and Nick Steinsberger) (emphases added in chart); [ReconAfrica’s Technical Team webpage on August 18, 2020](#), (Daniel Jarvie) (emphases added in chart).

<sup>98</sup> See ReconAfrica’s Directors & Officers webpage on September 22, 2020, <https://web.archive.org/web/20200922035617/https://reconafrika.com/about/directors-and-officers/> (Scot Evans and Nick Steinsberger) (emphases added in chart); ReconAfrica’s Technical Team webpage on September 22, 2020, <https://web.archive.org/web/20200922040810/https://reconafrika.com/about/technical-team/> (Daniel Jarvie) (emphases added in chart).

<sup>99</sup> But see [Technical Brief V28](#), at 5 (“He is an expert in developing *unconventional resources*.” (emphasis added)). Please note that Technical Brief V28 erroneously has two pages labelled “page 5,” and the quoted language is on the second such page.

Location Before Changes	Before Changes <sup>97</sup>	After Changes <sup>98</sup>
Nick Steinsberger – Second Paragraph	“While with Mitchell Energy, Nick was promoted to Completion Manager for the Barnett <i>Shale</i> (Texas) in 1995 and was responsible for completing the first 25 <i>horizontal shale wells</i> ever drilled and completed in the <i>Barnett Shale</i> , transforming <i>the Barnett into the industry’s first commercial shale play and ultimately</i> one of the largest gas fields in the USA reaching peak production of 5.75 Billion Cubic Feet per day in 2012. Based on its success in the Barnett, Mitchell Energy was sold to Devon Energy for \$3.1 Billion in 2002.”	“While with Mitchell Energy, Nick was promoted to Completion Manager for the Barnett <i>Fields</i> (Texas) in 1995 and was responsible for completing the first 25 <i>horizontal wells</i> ever drilled and completed in the <i>play</i> , transforming <i>it into ultimately</i> one of the largest gas fields in the USA reaching peak production of 5.75 Billion Cubic Feet per day in 2012. Based on its success in the Barnett, Mitchell Energy was sold to Devon Energy for \$3.1 Billion in 2002.”
Nick Steinsberger – Third Paragraph	“Nick is the pioneer of ‘slick water fracs’, a technique which transformed the economics and productivity of the Barnett shale and is now utilized in all commercial shale plays worldwide.”	This entire paragraph was deleted.
Nick Steinsberger – Fourth Paragraph	“In July 2003, Nick began Steinsberger Gas Consulting and <i>has been involved in over 700+ horizontal shale wells including work in the Woodford, Fayetteville, Marcellus, Utica, Eagle Ford, Wolfcamp, and several shale’s [sic] in Canada.</i> He is now considered a world leader in completions and well design, and has supervised over 1500 well programs in North American conventional and <i>unconventional</i> plays.”	“In July 2003, Nick began Steinsberger Gas Consulting and is considered a world leader in completions and well design, and has supervised over 1,500 well programs in North American <i>source rock</i> and conventional plays.”

<b>Location Before Changes</b>	<b>Before Changes<sup>97</sup></b>	<b>After Changes<sup>98</sup></b>
Daniel Jarvie – First Paragraph	“Mr. Daniel Jarvie is globally recognized as a leading analytical and interpretive organic geochemist, having evaluated conventional and <i>unconventional petroleum systems</i> around the World. Most notably, he completed the geochemical analysis for Mitchell Energy, in their development of the <i>Barnett Shale</i> of the Fort Worth Basin, in Texas.”	“Mr. Daniel Jarvie is globally recognized as a leading analytical and interpretive organic geochemist, having evaluated <i>petroleum systems</i> around the World. Most notably, he completed the geochemical analysis for Mitchell Energy, in their development of the <i>Barnett formation</i> of the Fort Worth Basin, in Texas.”
Daniel Jarvie – Second Paragraph	“Mr. Jarvie is retired Chief Geochemist for EOG Resources, the <i>largest producer of shale oil resource plays</i> in North America. He is the President of Worldwide Geochemistry, LLC, working as a consultant to industry, <i>focused on unconventional shale resource plays and prospects</i> , and has also established a research lab to evaluate various <i>aspects of unconventional shale-gas and shale-oil petroleum systems as well as conventional petroleum systems</i> .”	“Mr. Jarvie is retired Chief Geochemist for EOG Resources, one of the <i>largest independent oil producers</i> in North America. He is the President of Worldwide Geochemistry, LLC, working as a consultant to industry, and has also established a research lab to evaluate various <i>aspects of petroleum systems worldwide. [sic] as well as conventional petroleum systems worldwide</i> .”

#### **D. ReconAfrica’s Materials Perpetuate Ambiguity about its Plans to Target Unconventional Resources**

Despite ReconAfrica now asserting that it is targeting only conventional resources, some of the Company’s materials and statements still suggest its operations may target and/or uncover unconventional resources. First, ReconAfrica continues to compare the Kavango Basin to basins known among actors familiar with the oil and gas industry as unconventional plays best exploited using hydraulic fracturing. Second, the Company’s “Initial 3 Well Drilling Program,” as depicted in its play concept map, appears to include sites that it previously identified as unconventional “plays” or “traps.” Third, it continues to rely on estimates that include unconventional prospective resources. Finally, it continues to rely on a team comprising experts in unconventional resources.



1. ReconAfrica continues to analogize its project to other unconventional plays

ReconAfrica continues to analogize its licence areas to sites currently known for unconventional oil and gas resources. For example, as of September 13, 2021, the company’s website and current technical brief state that the “Kavango Basin Karoo” is “[i]nterpreted to be the same depositional environment as Shell’s organic-rich Whitehill Permian formation.”<sup>100</sup> The Whitehill Permian formation “contains one of the main shale gas targets in the Karoo Basin of South Africa.”<sup>101</sup> Additionally, Company personnel make similar analogies. For example, on January 11, 2021, Nick Steinsberger is quoted in a ReconAfrica News Release saying, ““There are many important similarities between the Kavango basin and the Permian Basin in West Texas, one of the world’s most prolific producing basins, where I have been actively drilling and completing wells for many years.””<sup>102</sup> Historically, the Permian Basin was well known for conventional oil and gas, but in recent years, has become known for fracking, which has revitalized production in the Basin.<sup>103</sup> In the same News Release, Jarvie, ReconAfrica’s geochemist, is quoted as saying, ““This important three well drilling program will provide ReconAfrica an initial assessment of the various Permian-age potential petroleum systems such as found in the age-equivalent Permian basin in Texas and Karoo basin in South Africa.””<sup>104</sup>

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<sup>100</sup> See, e.g., [Technical Brief V28](#), at 2 (most recent Technical Brief available as of September 13, 2021) (the Regional Karoo Permian Seaway graphic cited in Section III.A.(1) above, which continues to use the US EIA 2015 Shale Report’s estimate of 370 TCF of recoverable shale); [ReconAfrica’s Kavango Basin Operations webpage on September 13, 2021 \(using the same graphic\)](#); see also *supra*, notes 31, 32, 34 (statements prior to September 18, 2020 referring to the Whitehill as a “shale play”); US EIA 2015 Shale Report [Exh. 3], at A-127 (XIX-1 in original) (“South Africa has one major sedimentary basin that contains thick, organic-rich shales - - the Karoo Basin in central and southern South Africa.”), 128 (XIX-2 in original) (“A number of major and independent companies have signed Technical Cooperation Permits (TCPs) to pursue shale gas in the Karoo Basin, including Royal Dutch Shell, the Falcon Oil & Gas/Chevron joint venture, the Sasol/Chesapeake/Statoil joint venture, Sunset Energy Ltd. Of Australia and Anglo Coal of South Africa.”), 134 (XIX-8 in original) (“The organic-rich Lower Permian Whitehill Formation contains one of the main shale gas targets in the Karoo Basin of South Africa”).

<sup>101</sup> US EIA 2015 Shale Report [Exh. 3], at A-134 (XIX-8 in original).

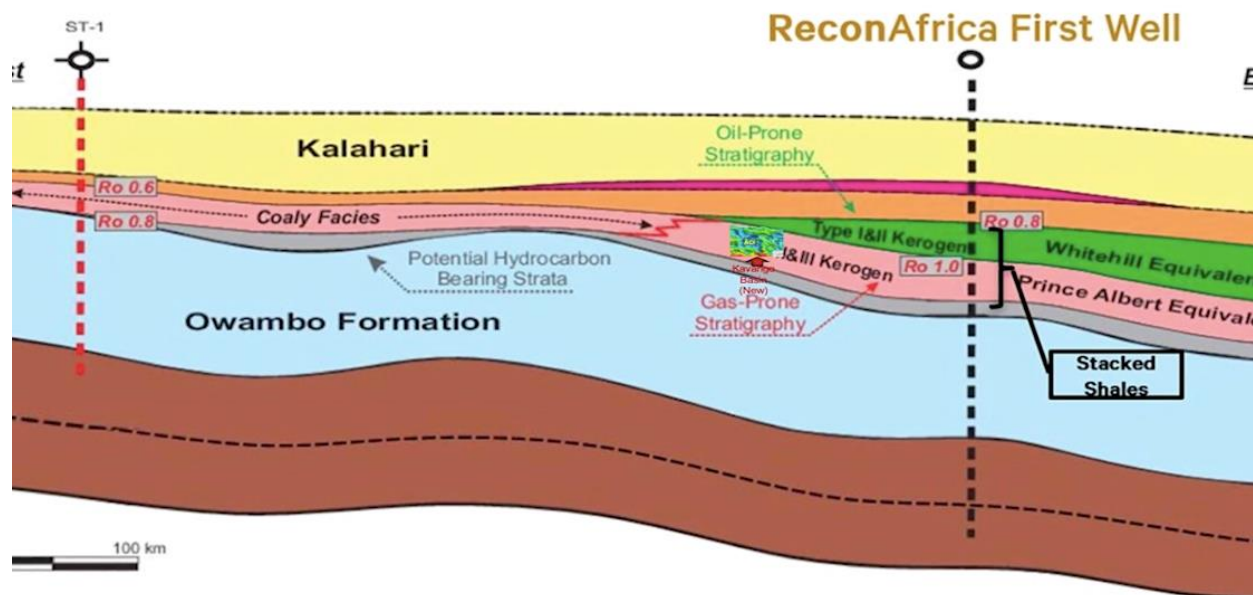
<sup>102</sup> ReconAfrica, January 11, 2021 News Release filed on SEDAR, at 1; see also *supra*, note 28 (interview with Steinsberger where he states, “The Permian basin in Texas is the same type of sedimentary basin with a huge amount of Permian shale in it. . . . We are very excited about the Permian shales.”).

<sup>103</sup> Enverus, Permian Basin, <https://www.enverus.com/permian-basin/> (last visited September 13, 2021); U.S. Energy Information Administration, *Permian Basin: Part 2 Wolfcamp Shale Play of the Midland Basin Geology review*, at 7 (August 2020), [https://www.eia.gov/maps/pdf/Permian\\_Wolfcamp\\_Midland\\_EIA\\_reportII.pdf](https://www.eia.gov/maps/pdf/Permian_Wolfcamp_Midland_EIA_reportII.pdf); Justin Worland, How an Oil Boom in West Texas Is Reshaping the World, TIME (January 3, 2019), <https://time.com/5492648/permian-oil-boom-west-texas/>.

<sup>104</sup> ReconAfrica, January 11, 2021 News Release filed on SEDAR, at 2.



In a video, ReconAfrica released March 25, 2021,<sup>105</sup> for its series “The Voices of Kavango,”<sup>106</sup> ReconAfrica’s current CEO, Evans, explains the elements that comprise a “conventional hydrocarbon accumulation.”<sup>107</sup> However, as he is doing so, the following graphic is on screen:<sup>108</sup>



A dotted line titled “ReconAfrica First Well” travels down through different sedimentary layers, including a green layer labeled “Whitehill Equivalent” and a pink layer labeled “Prince Albert Equivalent.” Then, a small, superimposed box is included with the following words in red underneath: “Kavango Basin (New).”

In the video, Evans never directly addresses the graphic. However, the graphic was used in ReconAfrica’s investor presentation materials beginning in May 2019, with the accompanying text: “[a]s Kavango Basin deepens to the east, ReconAfrica expects to identify thick thermally mature marine Permian *shales*.”<sup>109</sup> This graphic and its references to the “Whitehill Equivalent” and “Prince Albert Equivalent” continue to suggest an interest in unconventional resources.

<sup>105</sup> See ReconAfrica, March 25, 2021 News Release filed on SEDAR.

<sup>106</sup> See ReconAfrica, Video: *The Voices of Kavango – Chapter 2*, on ReconAfrica’s The Voices of Kavango webpage on September 13, 2021, <https://web.archive.org/web/20210913181501/https://recon africa.com/our-sustainable-approach/the-voices-of-kavango/> (click “Chapter 2: Partners in Namibia” button). Also available on Vimeo on September 13, 2021, <https://web.archive.org/web/20210913181744/https://vimeo.com/528688741>.

<sup>107</sup> *Id.* at 21:40-22:01.

<sup>108</sup> *Id.* at 21:51-22:01; Exh. 8 (a full-page-sized version of this graphic).

<sup>109</sup> See, e.g., May 2019 Investor Presentation [Exh. 1], at A-008 (emphasis added);

2. ReconAfrica’s “Initial 3 Well Drilling Program” appears to include sites it previously identified as unconventional “plays” or “traps”

Based on the maps it has published, ReconAfrica’s “Initial 3 Well Drilling Program” appears to include areas previously identified as potential unconventional plays. As mentioned above, two out of the three wells identified in the Company’s “Initial 3 Well Drilling Program” are located in areas that the Company labeled in its original play concept map, cited in Section III.A.(3) above, as “Unconventional Plays - Thick Permian Shales” and “Unconventional Traps.”<sup>110</sup> ReconAfrica continues to use what appears to be the same map to illustrate its targeted drilling locations, but the areas labeled “Unconventional Plays - Thick Permian Shales” and “Unconventional Traps” are now labeled “Source Rock Basins.”<sup>111</sup>

Without regard to the specific well locations, the Final EIA Report from June 2019 acknowledges that the “overall aim and objective of the proposed stratigraphic multi-wells drilling operations is to study the geology and petroleum systems of the PEL 73 and in particular, the potential for both large scale conventional and **non-conventional play** types within the Kavango Basin.”<sup>112</sup> Furthermore, the Final EIA Report indicates that “thick intervals of organic rich **marine shales**” are thought to be within the drilling locations.<sup>113</sup> On April 15, 2021, ReconAfrica announced that its first well confirmed a working petroleum system in the Kavango Basin.<sup>114</sup> The News Release says that the well “provides clear evidence of a working **conventional** petroleum system,” and that the data shows “over three discrete intervals in a stacked sequence of reservoir and **source rock**” and that “[t]he intervals penetrated include highly porous, permeable sediments and **marine source rocks** as predicted.”<sup>115</sup> As shown above, “source rock” is a term that ReconAfrica has substituted for “shale” or “unconventional resources” in published materials since September 18, 2020.<sup>116</sup>

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ReconAfrica, Investor Presentation dated September 2019 (“September 2019 Investor Presentation”) [Exh. 9], at A-219 (emphasis added); *see also* Final EIA Report [Exh. 2], at A-083 (figure 4.6) (same graphic).

<sup>110</sup> *See supra*, notes 42-46.

<sup>111</sup> *See supra*, notes 94-96.

<sup>112</sup> Final EIA Report [Exh. 2], at A-031 (emphasis added); *see also id.* at A-049 (stating “The Kavango Basin, location of PEL 73, offers both large scale conventional and **non-conventional** potential petroleum (oil and gas) exploration play types.” (emphasis added)).

<sup>113</sup> *Id.* at A-082 (figure 4.4) (emphasis added).

<sup>114</sup> *See* ReconAfrica, April 15, 2021 News Release filed on SEDAR; *see also* ReconAfrica, June 3, 2021 News Release filed on SEDAR (announcing that drilling in the second well site “again confirms a working petroleum system”).

<sup>115</sup> ReconAfrica, April 15, 2021 News Release filed on SEDAR, at 1 (emphases added).

<sup>116</sup> *See supra*, notes 44, 59, 65, 75, 80, 85, 86, 90, 95, 98, 111 (and accompanying text).

3. ReconAfrica continues to rely on estimates of prospective resources that include unconventional resources

As of September 13, 2021, ReconAfrica continues to cite Jarvie’s geochemical analysis, “Petroleum Potential for Kavango Basin.”<sup>117</sup> As noted above, by September 22, 2020, all references to “unconventional” and “shale” in Jarvie’s analysis were eliminated or changed.<sup>118</sup> However, Jarvie’s estimates of the “total petroleum generation potential” remain the same—the figures were not changed to exclude unconventional resources.<sup>119</sup>

For example, in its March 25, 2021 video for “The Voices of Kavango,” Steinke states that ReconAfrica’s geochemical analysis estimated that the basin would generate up to 120 billion barrels of oil.<sup>120</sup> This estimate appears to be a reference to Jarvie’s geochemical analysis, whose 120-billion-barrel estimate is for conventional *and unconventional* resources combined.<sup>121</sup> Steinke does not mention this fact or explain the basis for the 120 billion barrels of oil figure.<sup>122</sup>

As noted above, ReconAfrica retained Sproule, a qualified reserves evaluator, to prepare a report estimating its prospective resources. To date, the Sproule Reports for ReconAfrica are based entirely on estimates that represent unconventional prospective resources. As noted above, the 2018 and July 2020 reports are based on estimates of unconventional prospective resources.<sup>123</sup> In its most recent Statement of Reserves Data and Other Oil and Gas Information, Amended Form 51-101 F1, filed May 19, 2021, the Company references a Sproule report dated April 14, 2021, titled “Update of the Estimation of the Prospective Resources of Reconnaissance Energy Africa Ltd. in Botswana and Namibia as of December 31, 2020.”<sup>124</sup> While this report is not publicly available, the filing states, “The undiscovered petroleum initially-in-place and prospective resources included in the Sproule Report represent the *unconventional (tight gas, shale gas and tight oil) resources* of the Company’s lands and *do not include potential conventional prospective*

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<sup>117</sup> See [Technical Brief V28](#), at 4 (most recent Technical Brief available as of September 13, 2021).

<sup>118</sup> See *supra*, note 90.

<sup>119</sup> See *supra*, note 91.

<sup>120</sup> See *The Voices of Kavango – Chapter 2*, on ReconAfrica’s The Voices of Kavango webpage on September 13, 2021, <https://web.archive.org/web/20210913181501/https://reconafrika.com/our-sustainable-approach/the-voices-of-kavango/>, at 23:30-23:43 (click “Chapter 2: Partners in Namibia” button).

<sup>121</sup> See [Original Jarvie Geochemical Analysis](#), at 3 (emphasis added).

<sup>122</sup> See *supra* note 120.

<sup>123</sup> See *supra*, notes 35-36 (discussing how the estimates only represent unconventional resources and that the estimates of petroleum initially-in-place and prospective resources for the Namibia asset in the 2020 Sproule Report are unchanged from those estimated in the 2018 Sproule Report).

<sup>124</sup> Amended Form 51-101 F1, at 2; see also Initial AIF for 2020, at 20 (saying same).

*resources.*”<sup>125</sup> In addition, ReconAfrica’s main investment broker and analyst, Haywood Securities, Inc. (“Haywood”),<sup>126</sup> appears to still rely on the estimates from the 2020 Sproule Report.<sup>127</sup>

4. ReconAfrica continues to be led by a team with expertise in unconventional resources

As noted above, prior to September 18, 2020, ReconAfrica hired several unconventional resources experts for high-level positions. While biographical information on Company materials no longer explicitly references these experts’ experience in unconventional resources and fracking, the experts remain in their positions.<sup>128</sup>

#### IV. Conclusion

The foregoing raises questions regarding ReconAfrica’s compliance with applicable laws and regulations requiring full and proper disclosure of material changes to an Issuer’s business, operations, or capital and prohibiting false, untrue, or misleading statements (or omissions from statements). ReconAfrica’s public communications about its operations and whether the Company

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<sup>125</sup> Amended Form 51-101 F1, at 6 (emphases added); *see also* Original AIF for 2020, at 23 (same language); AIF for 2019 (same language). The Revised AIF for 2020 does not include the same discussion of the updated Sproule report. That information is only in its Amended Form 51-101 F1.

<sup>126</sup> Haywood was the agent for ReconAfrica’s recent \$23M public offering, *see* August 25, 2020 MD&A at 6; *see also* Material Change Report filed on SEDAR on August 10, 2020 (announcing letter agreement with Haywood for it to be the agent for the public offering), but also because Haywood’s Vice President and Director, David Elliott is one of ReconAfrica’s largest shareholders by virtue of his role as a Director of ReconAfrica’s predecessor company. *See* Reconnaissance Oil & Gas Corporation Financial Statements as of March 31, 2019, filed on SEDAR as “Financial statements of operating entity” on September 30, 2019, at 9 (listing Elliott as a director); August 30, 2019 News Release filed on SEDAR, at 2-3 (announcing reverse takeover that created ReconAfrica and explaining how Elliott received shares in ReconAfrica); August 30, 2019 Press Release filed on SEDAR (providing additional details on Elliott’s ownership of these shares); August 27, 2020 Press Release filed on SEDAR (listing how Elliott’s shares were diluted as a result of the public offering for which Haywood served as agent, and now owns between 7.26% and 8.58% depending on if he exercises his warrants).

<sup>127</sup> *See* Haywood, *ReconAfrica Company Update: 6-1 Well Update; TVD to be Reached this Week; Seismic Program Approved* (July 8, 2021) [Exh. 10], at 2 (citing the 2020 Sproule Report’s “total net un-risked mean prospective resource of 1,256 MMbbls of oil”); 2020 Sproule Report, at Discussion – Page 9, Table 5 (listing 1,256 MMbbl as the “Best” estimate of arithmetically aggregated unrisked prospective resources for the Company’s interest volumes in Namibia and Botswana, i.e., in Table 5, the second to bottom row, third column from the right).

<sup>128</sup> *See* [ReconAfrica’s Directors & Officers webpage on September 13, 2021](#) (Scot Evans and Nick Steinsberger); [ReconAfrica’s Technical Team webpage on September 13, 2021](#) (Daniel Jarvie).

is targeting, or plans to target, unconventional resources in the Kavango Basin warrant scrutiny by the TSX Venture Exchange. If the Company has, in fact, shifted its business objectives or operations from primarily targeting unconventional resources/shale to primarily targeting conventional resources, this could constitute a material change, reasonably likely to significantly affect the market price or value of a security issued by the Company. Yet, the Company has not filed a material change report. If the Company has not, in fact, changed the primary target of its operations from unconventional to conventional resources, or ruled out the prospect of developing unconventional reserves in the licence area through fracking, then its statements to the contrary may constitute material misrepresentations.

Above Ground, the Center for International Environmental Law, and the Global Law Alliance for Animals and the Environment respectfully request that the TSX Venture Exchange investigate the above matters and take any corrective action it deems appropriate.<sup>129</sup>

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<sup>129</sup> See, e.g., TSXV Corporate Finance Policies, Policy 2.9 §§ 1.3, 2.1, 2.2, 3.1(f), 4.1, 4.8(c); Policy 3.3 §§ 12.1 (“Any Issuer which fails to comply with any provision of this Policy may be subject to a trading halt of its securities without prior notice to the Issuer until the Issuer has complied with all Exchange Requirements.”), 12.2 (“The directors of any Issuer which fails to comply with any provision of this Policy, together with any officer, employee, agent and consultant of the Issuer who is responsible for the Issuer’s failure to comply with any provision of this Policy, may be prohibited by the Exchange from serving as a director or officer of an Issuer, or be prohibited from being an employee, agent or consultant of an Issuer.”).