CATALYST
LAW

April 25, 2019

LEGAL STATUS OF TERRACOIN COINS

I. LEGAL ISSUES TO BE ANALYZED

This letter sets forth a legal analysis as to whether Terracoin coins ("**Terracoin**") likely constitute a "security" for purposes of Section 2(a) (1) of the Securities Act of 1933 ("**Securities Act**") and Section 3(a)(10) of the Securities Exchange Act of 1934 ("**Exchange Act**"), and includes a detailed analysis of the four elements of the *Howey Test*, which is the predominant test used to determine whether a particular instrument qualifies as a security. Please consider that these statutes and case law can be interpreted in different ways, depending on the state, judicial stance, and the particular circumstances of any given case. Our analysis moves from the generally accepted criteria to the application of these statutes and case law to the particular facts and circumstances related to Terracoin.

II. ASSUMPTIONS, DISCLAIMERS, AND LIMITATIONS

The legal analysis and conclusions in this letter are made as of the date of this letter. Due to the nature of the industry and uncertain regulatory status of cryptocurrencies and other blockchain technologies in general, we cannot predict when, how, or whether any governmental or other authority will regulate such technologies or interpret existing regulations with respect to such technologies and their various applications. As a result, the legal analysis and conclusions in this letter may not be complete or accurate at any time after the date of this letter, and we have not agreed to and do not assume any obligation to update, revise, or supplement this letter.

The legal analysis and conclusions in this letter are based on the documents and representations provided by The Terracoin Foundation ("**Foundation**") set forth in Section IV and we assume (without further inquiry) that these documents and representations are true and accurate. Moreover, the legal analysis and conclusions in this letter are limited to the specific matters expressly stated and discussed in this letter. No opinion or conclusion is implied or may be inferred beyond the opinions and conclusions that are expressly stated.

The legal analysis and conclusions in this letter are not intended to be guarantees or to create any obligation or other ground for liability on behalf of Catalyst Law. Similarly, this letter is not intended to provide any legal advice or recommendation with respect to any specific transaction or event.

810 NW Marshall Street, Suite 300 | Portland, OR 97209 | t: 503.207.1711 f: 503.710.9057 www.catalystlawllc.com

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III. DEFINITIONS

In order to analyze Terracoin under the federal securities laws, we start with the broad definition of "security" contained in Section 2(a)(1) of the Securities Act:

> [A]ny note, stock, treasury stock, security future, security-based swap, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate transferable share, investment contract or, in general, any interest or instrument commonly known as a "security", or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing.

IV. REPRESENTATIONS AND WARRANTIES OF THE FOUNDATION

We have relied solely and exclusively on the documents and representations provided by the Foundation in the Representation Letter Agreement dated April 25, 2019 (each a "**Representation**" and together "**Representations**"), which are as follows:

1. The information provided in The Terracoin White Paper (available at https://wiki.terracoin.io/view/Whitepaper) is true and accurate.
2. Terracoin's functionality is not dependent on permission or activities of the Foundation.
3. Terracoin has not been pre-mined.
4. Terracoin has never had an Initial Coin Offering.
5. Terracoin coins can be exchanged for goods and services.
6. Terracoin coins are currently transferable at four centralized exchanges and one de-centralized exchange.
7. Terracoin's maximum coin supply is 42 million coins, which is significantly more than many similar cryptocurrences (e.g. twice Bitcoin's maximum supply), which the Foundation believes will help keep the price low so it can be used as a currency rather than an investment.
8. From the time Terracoin was created in 2012, it has utilized a "Fair Launch" where any willing person or party could mine Terracoin.
9. Terracoin allows permission-less access to mining Terracoin. There is no centralized authority to allow or disallow any user, miner, or masternode.

10. There are currently several thousand miners actively mining Terracoin (although an exact count is not possible).

11. There are currently several thousand users of Terracoin (although an exact count is not possible).

12. The Foundation's "Decentralized Governance by Blockchain" (or "DGBB") rules are publicly available and reviewable (available under the "Governance" tab at https://wiki.terracoin.io/).

13. Any changes to the Foundation's DGBB rules are shared and discussed publicly (available under the "Governance" tab at https://wiki.terracoin.io/).

14. The Foundation and core developers are not holding or selling a large percentage of active Terracoin coins.

15. The Terracoin blockchain is publicly viewable and auditable (available at https://insight.terracoin.io).

16. Terracoin is built on open source code that is publicly available and reviewable (available at https://github.com/terracoin/).

17. Changes to the source code will be publicized (available at https://github.com/terracoin/) and the public will be able to comment on such changes on Mattermost (available at https://mattermost.terracoin.io/).

18. Anyone may request a change to Terracoin's source code by submitting a "pull request", but the Foundation will ultimately determine if such request is accepted and implemented.

19. Users are able to create forks in the Terracoin source code. Such forks may be "hard-forked", which would change the nature of Terracoin. If sufficient users follow the "hard-forked" code, that would create a new blockchain that is separate and distinct from Terracoin.

20. Terracoin has a two-minute block time for each block reward. Currently, each block reward generates nine Terracoin coins.

21. Every 1,050,000 blocks (or approximately every four years), the block reward is halved.

22. A "superblock" occurs every 21,600 blocks (or approximately every 30 days). Each superblock can generate up to 21,600 Terracoin coins via the proposal system.

23. Terracoin block rewards are split between miners (45%), masternodes (45%), and decentralized governance (10%). This split rewards the miners for processing blocks while securing the network, and rewards the masternodes for securing the masternode network and processing InstantSend and PrivateSend.

24. The awards to miners and masternodes are distributed through each block reward. However, the awards to the decentralized governance is only distributed through each superblock.

25. The Foundation is currently paid 6,480 Terracoin coins per month. A public ledger will disclose the amount Foundation Members are paid (available at: https://docs.google.com/spreadsheets/d/1KyU2g5XjrzwYlswde9GzOT6N26n-CJpx7LviYgBvCXc/).

26. Any person who holds at least 5,000 Terracoin coins can run a "masternode". There are currently 686 masternodes, which can be monitored by the public (available at https://services.terracoin.io/). No permission from developers or the Foundation is needed to create or maintain a masternode.

27. Anyone may distribute 10 Terracoin coins to the miner and masternode of the next block on the blockchain in order to propose certain changes to the DGBB rules or request an amount of the next available Terracoin superblock for a proposed project. These proposals are voted on by masternode holders. If the proposal passes, the owner who proposed the change is rewarded with the next superblock in order of yes-minus-no votes in that month's proposal queue (available at https://services.terracoin.io/budget).

28. Masternode holders can vote to change or eliminate Terracoin pay to Foundation members.

29. The masternode network can also be used for future innovations, such as an application layer. Any increase in the number of miners and masternodes increases the security of the network against attacks.

V. THE HOWEY TEST

In its *Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO* dated July 25, 2017 ("**DAO Report**"), the Securities and Exchange Commission ("**SEC**") stated that whether a digital asset (like Terracoin) is offered and sold as a security will depend on the facts and circumstances specific to that asset and the application of the Howey Test to such facts and circumstances. The SEC's commitment to utilizing the Howey Test as criteria for digital assets and cryptocurrencies has been recently affirmed in the March 7, 2019 letter from Chairman Jay Clayton to Representative Ted Budd.

Under Section 2(a)(1) of the Securities Act and Section 3(a)(10) of the Exchange Act, a security includes "an investment contract". *See* 15 U.S.C. §§ 77b-77c. An investment contract is an investment of money in a common enterprise with a reasonable expectation of profits to be derived from the entrepreneurial or managerial efforts of others. *See SEC v. Edwards*, 540 U.S. 389, 393 (2004); *SEC v. W.J. Howey Co.*, 328 U.S. 293, 301 (1946); *see also United Housing Found., Inc. v. Forman*, 421 U.S. 837, 852-53 (1975) (The "touchstone" of an investment contract "is the presence of an investment in a common venture premised on a reasonable expectation of profits to be derived from the entrepreneurial or managerial efforts of others."). This definition embodies a "flexible rather than a static principle, one that is capable of adaptation to meet the countless and variable schemes devised by those who seek the use of the money of others on the promise of profits." *Howey*, 328 U.S. at 299. The test "permits the fulfillment of the statutory purpose of compelling full and fair disclosure relative to the issuance of 'the many types of instruments that in our commercial world fall within the ordinary concept of a security.'" *Id.* In analyzing whether something is a security, "form should be disregarded for substance," *Tcherepnin v. Knight*, 389 U.S. 332, 336 (1967), "and the emphasis should be on economic realities underlying a transaction, and not on the name appended thereto." *United Housing Found.*, 421 U.S. at 849.

The four required factors of the Howey Test are:

(i) an investment of money;

(ii) in a common enterprise;

(iii) with an expectation of profits;

(iv) solely from the efforts of others.

Howey, 328 U.S. at 298-299. Under the Howey Test, all four elements must be satisfied for an instrument to be deemed a "security". Moreover, it should be noted that Howey test is the only securities test which is adapted for the distinctive features of cryptocurrency sale.

VI. ANALYSIS OF HOWEY TEST ELEMENTS

A. Element 1: Is there an investment of money?

Coins that are not sold for value do not involve an investment of money. For example, if all coins are distributed for free or are only produced through mining, then there is no sale for value. Conversely, coins which are sold in a crowdsale (regardless of whether sold for fiat or crypto currency or anything else of value) involve an investment of money. Furthermore, an investment of money may include the provision of capital, assets, cash, goods, services, or a promissory note. Finally, coins may be sold via an initial coin offering ("**ICO**"), which is held when developers issue coins – either previously mined ("**pre-mined**") or in anticipation of mining ("**pre-sale**") – in exchange for money.

New Terracoin coins are only distributed through mining. Terracoin does not currently (nor has it ever) been pre-mined by its developers or the Foundation and Terracoin has never held an ICO. Terracoin coins are not distributed by an issuer in exchange for money. Rather, they are distributed to miners in exchange for the provision of resources (the mining through computing power and solving blocks) and to masternode holders in exchange for providing network security and privacy through the processing transaction through InstaSend and PrivateSend.

Accordingly, because new Terracoin coins are only issued through mining and are not sold or distributed in exchange of money or anything else of value, it is unlikely that Terracoin satisfies this element of the Howey Test.

B. Element 2: Common Enterprise

The US Federal Circuit Courts of Appeal are somewhat divided in their interpretation of the "common enterprise" prong of the Howey Test due to the fact that the term "common enterprise" is not precisely defined in the statutes. Most federal courts define a "common enterprise" as one that is horizontal (meaning that investors pool their money or assets together to invest in a project); however, other courts use different definitions. Generally, the interpretations of "common enterprise" fall into the following three categories (with some circuit courts relying on multiple categories):

(a) **Horizontal Commonality** exists with the pooling of investor contributions, whereby the success of the individual investor depends on the success of the overall ventures. Pooling can sometimes – but does not always – include a pro-rata sharing of profits. But horizontal commonality may be absent when the users obtain unique assets (e.g., a condo) by which the profit they obtain is dependent on the success of their individual asset rather than the common good. Overall, the key issue appears to be whether funds are pooled. Thus, in cases where there is no pooling of funds or sharing of profits, a "common enterprise" does not exist.

(b) **Broad Vertical Commonality** exists when the success of the coin holders depends on the promoter's expertise.

(c) **Narrow Vertical Commonality** exists when investor's profits are tied to the promoter's profits.

If coins have been pre-mined before code has been deployed on a blockchain, it is more likely to result in a "common enterprise" where the profits arise from the efforts of others. This is because the buyers are completely dependent on the actions of the developers, and the buyers cannot actually participate in the network until a later time. In contrast, if there is a functioning network, this is less likely, but still it may have some similarities to a "common enterprise" where the profits arise from the efforts of others. In other words, the closer the sale is to launch of the network, the less likely it is to be a "common enterprise".

Terracoin was launched in 2012 utilizing a "Fair Launch" where any willing person or party could mine Terracoin coins. Terracoin allows permission-less access to mining Terracoin. There is no centralized authority to allow or disallow a user or miner. According to the Foundation, any incentives are derived through coin holders' own efforts, rather than through a passive investment. The miners and masternode owners are, in fact, the main contributors to the platform database and may not be considered passive investors who solely rely on efforts of others.

If a cryptocurrency's framework is truly decentralized and has no centralized administration, there is a high likelihood that it will not be viewed as being a "common enterprise". On the other end of the spectrum, if a cryptocurrency is highly centralized in the development and maintenance of the network, then there is a stronger case for "horizontal commonality" because invested funds are likely pooled among those controlling the network.

With respect to Terracoin, the Foundation alone is responsible for determining whether a given pull request is implemented. However, any user may make a pull request, and such requests are public with the larger diverse community able to comment on and discuss the merits of any proposed changes.

Terracoin utilizes a series of masternodes which are not connected to the Foundation. There are currently over 600 masternodes. Most notably, a masternode does not require permission from developers or the Foundation; rather, ability to maintain a masternode requires that a user hold at least 5,000 Terracoin coins. Masternodes have the ability to change or eliminate Terracoin pay to members of the Foundation. Thus, the masternodes serve as a decentralized counter to the Foundation.

Further, a key intent of securities laws is largely to protect investors from risks that are known only to the issuer of a security. In an enterprise with strong "vertical commonality", the promoter would have access to information that the investing public would not. The Securities Act is a disclosure-based statute that compels issuers of registered securities to make detailed disclosures. In comparison, the Terracoin network is designed to be transparent in at least the following ways: (a) Terracoin provides for open source code, which is available at GitHub (https://github.com/terracoin/); (b) changes to the source code will be publicized and the public will be able to comment on such changes; and (c) the blockchain is publicly viewable and auditable. Such transparency and public engagement in the enterprise suggest that Terracoin unlikely to be viewed as a "common enterprise" under any of the various interpretations of the definition.

Given that (a) there is no centralized permission required to participate in the use or mining of Terracoin and (b) the centralized maintenance of the network by the Foundation and core developers is both transparent to the community and counter-balanced by the diverse masternode holders, it is unlikely that Terracoin would be viewed as a "common enterprise". (Please note, that securities regulators would be less likely to find a "common enterprise" if the Foundation were to develop further processes to allow a more decentralized process for managing and deciding on pull requests.)

C. Element 3: Expectation of profits

The "expectation of profits" is broadly defined as any form of capital appreciation, cash return on investment, or other earnings such as dividends and interests. Under this element, "profit" refers to the type of return or income an investor seeks on their investment (rather than the profits that the system or issuer might earn). Thus, for purposes of blockchain coins, this could refer to any type of return or income earned as a result of being a blockchain coin holder, which would be narrowed to the extent it is derived passively (i.e., from the efforts of others). Since courts consider this factor through the lens of the "efforts of others" factor, we analyze this prong along with the fourth factor below. In other words, just because there is a return or profit, this does not mean that the investment contract is a security. It is the essentially passive nature of the return (as determined by the "efforts of others" analysis) that results in an "investment contract" and security, as opposed to a simple contract instrument.

The answer to the question whether there is an expectation of profit basically lays in the area of what function particular coin has. Coins which give (or purport to give) traditional equity, debt, or other investor rights are almost certainly securities. A coin which does not have any real function or is used in a network with no real function is very likely to be bought with an expectation of profit from the efforts of others, because no real use or participation by coin holders is possible. Voting rights alone do not constitute real functionality. A coin which has a specific function that is only available to coin holders is more likely to be purchased in order to access that function and less likely to be purchased with an expectation of profit.

Terracoin does not grant holders to any tool or platform that is not available to non-holders. Terracoin is a functional coin that can be used to purchase goods and services from those accepting Terracoin coins. However, because of Terracoin's relatively small community of users and low valuation as of the date of this letter, it is likely that much of Terracoin's value is speculative. Therefore, there is a strong likelihood that Terracoin satisfies the "expectation of profits" test.

D. Element 4: Predominantly from the efforts of others

A coin is not functional in and of itself if its value depends on someone taking specific manual action outside of the network or otherwise relies on a level of trust in a third party taking action off-blockchain. This sort of coin is more likely to be bought for speculation.

In contrast, the value of a coin which is built with all the necessary technical permissions and works automatically in accordance with a smart contract does not rely on manual actions of any third party. The buyers of this sort of coin are more likely to purchase the coin for use rather than with the expectation of profit from the efforts of others. However, even if there is a return or profit, the coin sale contract is not necessarily deemed to be a security. Rather, it is the passive nature of the return or profit (as determined by the "efforts of others" analysis) that results in a "coin sale contract" and security, as opposed to a simple contract instrument.

The legal analysis for whether a limited liability company membership interest is a security is relevant here:

> If the holder of the membership interest participates actively in the LLC (it is "member-managed"), a court is likely to find that he is not relying solely on the efforts of others and the interest is not a security. If the interest holder does not participate actively in the LLC (it is "manager-managed"), then a court is likely to find that he is a passive investor and the interest is a security.

Therefore, in order to avoid giving an expectation of profit solely from the effort of promoters or third parties to the coin purchaser, the coin must not offer any form of dividends, interest, or any other passive income.

Here, Terracoin's website references the "passive income via masternode". However, such profits are not truly passive profits from the efforts of others. Rather, masternode owners participate directly in the development, utility, and network security and privacy of Terracoin by facilitating InstaSend and PrivateSend transactions. They also participate in the decentralized governance of Terracoin and vote on governance proposals. Masternode owners are paid a reward for their service, insofar as they receive 45% of the mined coins. Thus, masternode owners are actively contributing to the maintenance of the network. Further, masternode owners are separate from the Foundation and core developers of Terracoin. The only requirement to be a masternode owner is to hold 5,000 Terracoin coins, so masternode owners are simply coin holders. Nonetheless, we recommend that the Foundation remove references to “expected profits” or other language that could be construed as promoting the income potential of Terracoin.

With regard to Terracoin, all functionality is inherent in the coin and occurs programmatically, meaning that a coin is built with all the necessary technical permissions and the coin holder does not rely on manual actions of a single or centralized third party. The masternode owners provide certain resources to the network and are compensated for this, but, as discussed above, the masternode community is also a decentralized and diverse group of Terracoin holders – currently there are 686 masternodes. If the main incentive to buy a coin is an opportunity to get the access to and the utility of a specific blockchain platform and its utility benefits, such a coin may not be deemed a passive investment relying on the efforts of others.

Additionally, if the sale of coins is made before any code has been deployed on a blockchain, it is more likely to result in a "common enterprise", where the profits arise from the efforts of others. This is because the buyers are completely dependent on the actions of the developers, rely on their own efforts to develop the platform, and cannot actually participate in the network until a later time. And, vice versa, if there is an existing functioning network, and the buyers step in as members of the network who have specific rights and opportunity to influence the outcome, such system should not be viewed as a "common enterprise" where the profits arise from the efforts of others. As previously noted, Terracoin has never been pre-mined. Buyers of Terracoin coins have rights to suggest changes (via pull-requests) and holders of a significant amount of coins may have additional rights as masternode owners.

Finally, the transparency plays a two-fold role in this analysis: (a) a network needs transparent software and a transparent blockchain in order to ensure that the network is properly decentralized; and (b) a transparent developer community will not be able to change the software in a way that damages the decentralization. If the software is developed with open source distribution and there is public discussion of goals, then there is no single organization or individual central to the expectation of profits.

Here, Terracoin is designed for transparency. Terracoin’s source code is open source and available at GitHub (https://github.com/terracoin/). Any changes to the Terracoin source code will be publicized and the public will be able to comment on such changes. In fact, Terracoin’s history is evidence that its success was not dependent on the efforts of a single person or group. More specifically, Terracoin’s anonymous founder stepped away from the maintenance and development of the Terracoin software and, thereafter, a group of interested users formed the Foundation to step in and continue the development and support of Terracoin.

Given the analysis above, it is unlikely that Terracoin would be viewed as an investment with the expectation of profits reliant solely on the efforts of others. However, to strengthen its position on this element, we do recommend that the Foundation makes changes to the

White Paper and website to remove references to profitability.

VII. CONCLUSION

Based on the documents and representations provided by the Foundation and the legal analysis and conclusions set forth above, we believe that Terracoin coin sales are unlikely to be classified as or otherwise deemed to be a "security" under applicable laws. Although the purchase of a Terracoin coin could be viewed as stemming from an expectation of profit (thus satisfying the third element of the Howey Test), Terracoin is unlikely to satisfy the first, second, or fourth elements of the Howey Test. As a result, it is unlikely to be considered a security.

The legal analysis and conclusions in this letter are not intended to be guarantees or to create any obligation or other ground for liability on behalf of Catalyst Law. Similarly, this letter is not intended to provide any legal advice or recommendation with respect to any specific transaction or event.

Catalyst Law, LLC,
an Oregon limited liability company

By: Kimberly Pray
Name: Kimberly Pray
Title: Partner