

CLAIMS

What is claimed is:

1. A method for tokenizing a natural resource, comprising:

receiving, via a graphical user interface (GUI) into a server computer, data corresponding to proof of natural resource rights to prospect for, explore for, analyze, estimate, mine, process, refine, produce, and/or harvest a natural resource in a specified region by a first party, wherein said data corresponding to proof of natural resource rights includes a network address to an image of an official document;

receiving, via the GUI into the server computer, a digital signature from the first party assigning at least a portion of the natural resource rights to a first quantity of distributed ledger tokens;

issuing, with the server computer, the first quantity of distributed ledger tokens by loading the network address and the image onto the distributed ledger, wherein each of the distributed ledger tokens ~~carrying~~ carries a smart contract entitling the bearer to a fractional amount of at least a portion of the natural resource rights; and

crediting, with the server computer, a second quantity of the issued distributed ledger tokens to the first party by transferring the second quantity of the issued distributed ledger tokens to an electronic wallet owned by the first party.

2. The method for tokenizing a natural resource of claim 1 , wherein the first quantity of distributed ledger tokens is greater than the second quantity; and wherein the first quantity not included in the second quantity is credited to an issuer of the distributed ledger tokens.

3. The method for tokenizing a natural resource of claim 1 , wherein the first quantity of distributed ledger tokens is equal to the second quantity of distributed ledger tokens.

4. The method for tokenizing a natural resource of claim 1 , further

comprising: generating the GUI for receiving and displaying information about natural resource rights and the tokenization thereof and interfacing, in cooperation with a web server, with the GUI to drive displays in networked electronic devices.

5. The method for tokenizing a natural resource of claim 4, wherein interfacing with the GUI includes outputting HTML pages and receiving user inputs on electronic displays.

6. The method for tokenizing a natural resource of claim 4, wherein interfacing with the GUI includes transmitting and receiving data to the GUI included in a downloaded application resident in networked electronic devices.

~~7. The method for tokenizing a natural resource of claim 1, wherein receiving data corresponding to proof of rights comprises receiving a network address to an image of an official document; and wherein issuing the first quantity of distributed ledger tokens includes loading the network address and/or the image onto the distributed ledger.~~

~~8~~7. The method for tokenizing a natural resource of claim 1, wherein the natural resource rights include a right to explore for hydrocarbon deposits including a crude oil and/or a natural gas deposit in the specified region.

~~9~~8. The method for tokenizing a natural resource of claim 1, wherein the natural resource rights include a right to produce crude oil and/or natural gas from the specified region.

~~10~~9. The method for tokenizing a natural resource of claim 1, wherein the natural resource rights include a permit to drill for oil and/or natural gas.

~~11~~10. The method for tokenizing a natural resource of claim 1, wherein the natural resource rights include a right to mine shale oil and/or tar sands.

~~12~~11. The method for tokenizing a natural resource of claim 1 , wherein the natural resource rights include a right to fracture-produce (“frack”) a known deposit.

~~13~~12. The method for tokenizing a natural resource of claim 1 , wherein the natural resource rights include a mining claim.

~~14~~13. The method for tokenizing a natural resource of claim 1 , wherein the natural resource rights include a public right to prospect for an ore.

~~15~~14. The method for tokenizing a natural resource of claim 1 , wherein the natural resource rights include a permit to operate and/or continue to operate a mine.

~~16~~15. The method for tokenizing a natural resource of claim 1 , wherein the natural resource rights include a right to conduct logging operations.

~~17~~16. The method for tokenizing a natural resource of claim 1 , further comprising: receiving, via the GUI into the server computer, one or more parameters corresponding to tokenization of the natural resource.

~~18~~17. The method for tokenizing a natural resource of claim ~~17~~16, wherein the one or more parameters include a number of distributed ledger tokens to be issued.

~~19~~18. The method for tokenizing a natural resource of claim ~~17~~16, wherein the one or more parameters include a limitation to the natural resource rights.

~~20~~19. The method for tokenizing a natural resource of claim ~~19~~18, wherein the one or more parameters include an exclusion of one or more natural resources comprehended by the proof of rights.

~~21~~20. The method for tokenizing a natural resource of claim ~~17~~16, wherein the one or more parameters include a time limit, after which the token expires.

~~22~~21. The method for tokenizing a natural resource of claim ~~17~~16, wherein the one or more parameters include a par value of each token.

~~23~~22. The method for tokenizing a natural resource of claim ~~17~~16, wherein the one or more parameters include a distribution of proceeds from token sales.

~~24~~23. The method for tokenizing a natural resource of claim ~~17~~16, wherein the one or more parameters include one or more rules for distribution of proceeds arising from sale or transfer of material corresponding to the natural resource rights.

~~25~~24. The method for tokenizing a natural resource of claim ~~24~~23, wherein the one or more rules for distribution include a dividend denominated in a commodity token corresponding to a natural resource produced under the natural resource rights.

~~26~~25. The method for tokenizing a natural resource of claim ~~24~~23, wherein the one or more rules for distribution include a dividend denominated in a cryptocurrency, fiat currency, or other natural resource-based commodity token.

~~27~~26. The method for tokenizing a natural resource of claim ~~24~~23, wherein the one or more rules for distribution include a conversion of natural resource tokens into commodity tokens corresponding to production of a material corresponding to the natural resource rights.

~~28~~27. The method for tokenizing a natural resource of claim 1 , wherein receiving a digital signature includes making a binding contract that transfers at least a portion of a realized value corresponding to the natural resource rights collectively to token holders.

~~29~~28. The method for tokenizing a natural resource of claim 1 , further comprising:
minting a third quantity of the distributed ledger tokens.

~~30~~29. The method for tokenizing a natural resource of claim ~~29~~28, wherein the third quantity is greater than the first quantity.

~~31~~30. The method for tokenizing a natural resource of claim 1 , wherein the minted distributed ledger tokens are blockchain tokens.

~~32~~31. The method for tokenizing a natural resource of claim 1 , wherein issuing the distributed ledger tokens includes issuing the tokens with a contract that discloses the third quantity of minted tokens and sets forth conditions for issuance of additional distributed ledger tokens above and beyond the second quantity.

~~33~~32. The method for tokenizing a natural resource of claim 1 , wherein crediting the second quantity of issued distributed ledger tokens to the first party includes crediting an account of the first party on an exchange that issued the natural resource tokens.

~~34~~33. The method for tokenizing a natural resource of claim 1 , wherein the first quantity is greater than the second quantity.

~~35~~34. The method for tokenizing a natural resource of claim 1 , further comprising: receiving, into the server computer, data corresponding to an assessment of the natural resource value; and
publishing the data onto the distributed ledger.

~~36~~35. The method for tokenizing a natural resource of claim ~~35~~34, wherein the data corresponding to the assessment of natural resource value comprises a sonogram, a core sample, an assay, a production rate, a production volume, and/or a drilling depth.

~~37~~36. The method for tokenizing a natural resource of claim ~~35~~34, wherein the first party is required by a contract carried by the distributed ledger to submit the data corresponding to the assessment of the natural resource value.

~~38~~37. The method for tokenizing a natural resource of claim 1 , further comprising:

administering, with the server computer, a distributed ledger exchange to swap at least a portion of the issued natural resource tokens for second natural resource tokens and/or for one or more cryptocurrencies.

~~39~~38. A computer method for administering a natural resource transaction, comprising:

receiving, via a first graphical user interface (GUI) from a seller, an ask price for a quantity of a tokenized natural resource, denominated in a first currency;

receiving, via a second GUI from a buyer, a bid price for the quantity of the tokenized natural resource, denominated in a second currency;

determining that the ask price and the bid price meet a match criterion; receiving a first digital bearer asset, cryptocurrency, and/or digital security transaction corresponding to the bid price from a buyer wallet into a transaction wallet; transmitting a second digital bearer asset, cryptocurrency, and/or digital security transaction corresponding to the ask price from the transaction wallet to a seller wallet;

issuing a distributed ledger token corresponding to the quantity of the tokenized natural resource; and

transmitting the distributed ledger token to the buyer wallet.

~~40~~39. The computer method of claim ~~39~~38, wherein the first currency comprises United States dollars.

4140. The computer method of claim ~~39~~38, wherein the first currency comprises a cryptocurrency.

4241. The computer method of claim ~~39~~38, wherein the second currency comprises a different currency than the first currency.

4342. The computer method of claim ~~39~~38, wherein the second currency comprises the same currency as the first currency.

4443. The computer method of claim ~~39~~38, wherein the first GUI and the second GUI comprise respective instances of the same GUI.

4544. The computer method of claim ~~39~~38, further comprising:
displaying, via the GUI to at least one of the seller or the buyer, at least one benchmark price for the quantity of the tokenized natural resource.

4645. The computer method of claim ~~39~~38, further comprising:
displaying, via the GUI to at least one of the seller or the buyer, at least one estimated price for the quantity of the tokenized natural resource.

4746. The computer method of claim ~~39~~38, further comprising: displaying, via the GUI to at least one of the seller or the buyer, at least one historical price for the quantity of the tokenized natural resource.

4847. The computer method of claim ~~39~~38, wherein determining that the ask price and the bid price meet a match criterion includes determining that the bid price is greater than or equal to the ask price plus a transaction fee.

~~4948~~. The computer method of claim ~~3938~~, wherein receiving the first digital bearer asset, cryptocurrency, and/or digital security transaction from the buyer wallet into the transaction wallet comprises receiving a fungible cryptocurrency and/or digitally securitized asset.

~~5049~~. The computer method of claim ~~3938~~, wherein receiving the first digital bearer asset, cryptocurrency, and/or digital security transaction comprises receiving a distributed ledger token corresponding to a quantity of a second tokenized natural resource different than the tokenized natural resource.

~~5150~~. The computer method of claim 39, further comprising:
displaying a property of the tokenized natural resource in the GUI.

~~5251~~. The computer method of claim ~~510~~, wherein the property includes a commodity grade, a physical property, an extrinsic property, an elemental analysis, and/or other properties that may affect a value of the natural resource.

~~5352~~. The computer method of claim ~~3938~~, further comprising:
displaying price information about the commodity quantity in the GUI.

~~5453~~. The computer method of claim ~~5352~~, wherein displaying the price information includes displaying a price history for previous quantities of the tokenized natural resource.

~~5554~~. The computer method of claim ~~5352~~, wherein displaying the price information includes displaying a modeled price for the tokenized natural resource.

~~5655~~. The computer method of claim ~~3938~~, wherein the quantity of the tokenized natural resource comprises a particular distinguishable instance of the natural resource and/or a generalized portion of the natural resource.

~~57~~56. The computer method of claim ~~39~~38, wherein the natural resource comprises in-situ minerals, metals, and hydrocarbon deposits.

~~58~~57. The computer method of claim ~~57~~56, wherein the quantity comprises a ton.

~~59~~58. The computer method of claim ~~57~~56, wherein the quantity comprises a metric tonne.

~~60~~59. The computer method of claim ~~57~~56, wherein the quantity comprises a quantity of refined metal produced from the in-situ minerals, metals, and hydrocarbon deposits.

~~61~~60. The computer method of claim ~~39~~38, wherein the natural resource is to be produced at a future date.

~~62~~61. The computer method of claim ~~39~~38, wherein the natural resource exists in a transportable form at the moment of distributed ledger token issuance.

~~63~~62. The computer method of claim ~~39~~38, wherein the natural resource comprises mined ore or coal.

~~64~~63. The computer method of claim ~~39~~38, wherein the natural resource comprises hydrocarbon deposits including oil and/or natural gas.

~~65~~64. The computer method of claim ~~64~~63, wherein the natural resource comprises liquefied natural gas.

~~66~~65. The computer method of claim ~~64~~63, wherein the quantity comprises a number of standard cubic feet.

~~67~~66. The computer method of claim ~~64~~63, wherein the quantity comprises a unit of mass.

~~68~~67. The computer method of claim ~~64~~63, wherein the quantity comprises a unit of energy.

~~69~~68. The computer method of claim ~~64~~63, wherein the natural resource comprises a portion of a natural gas deposit.

~~70~~69. The computer method of claim ~~38~~39, wherein the natural resource comprises an agricultural product.

~~71~~70. The computer method of claim ~~39~~38, further comprising:
receiving a second ask price for the distributed ledger token at a later date;
wherein the distributed ledger token represents the same distinguishable instance of the natural resource as when the distributed ledger token was issued.

~~72~~71. The computer method of claim ~~39~~38, further comprising:
receiving notice that the distinguishable instance of the natural resource is delivered as a distinguishable instance of a commodity material;
receiving payment for the delivered commodity material; and
redeeming the distributed ledger token for a currency corresponding to the received payment.

~~73~~72. The computer method of claim ~~72~~71, wherein the distributed ledger token is burned when redeemed.

~~74~~73. The computer method of claim ~~72~~71, wherein the value of the distributed ledger token is reset to zero when redeemed.

~~75~~74. The computer method of claim ~~39~~38, wherein the value of the distributed ledger token is set to equal the current value of the quantity of the natural resource.

~~76~~75. The computer method of claim ~~75~~74, whereby the distributed ledger token is asset-backed by the distinguishable instance of natural resource it is issued to represent.

~~77~~76. A non-transitory computer-readable medium carrying computer instructions to cause a computer to execute a method, comprising:

- receiving, via a first graphical user interface (GUI) from a seller, an ask price for a quantity of a natural resource, denominated in a first currency;

- receiving, via a second GUI from a buyer, a bid price for the quantity of the natural resource, denominated in a second currency;

- determining that the ask price and the bid price meet a match criterion; receiving a first digital asset, cryptocurrency, digital security financial instrument, and/or digitally securitized asset transaction corresponding to the bid price from a buyer wallet into a transaction wallet;

- transmitting a second digital asset, cryptocurrency, digital security financial instrument, and/or digitally securitized asset transaction corresponding to the ask price from the transaction wallet to a seller wallet;

- issuing a distributed ledger token corresponding to the quantity of the natural resource; and

- transmitting the distributed ledger token to the buyer wallet.

~~78~~77. A computer system, comprising:

- a Webserver configured to output a first GUI to a first device for a seller and to receive an ask price for a quantity of a natural resource denominated in a first currency, to output a second GUI to a second device for a buyer, and to receive a bid price for the quantity of the natural resource denominated in a second currency; and

a server computer, operatively coupled to the Webserver, and configured to determine that the ask price and the bid price meet a match criterion, to authorize first and second cryptocurrency and/or digitally securitized asset transactions to respectively transfer the ask price to the seller and receive the bid price from the buyer, and to transmit said authorizations to the Webserver.

~~79~~78. The computer system of claim ~~78~~77, further comprising:

a plurality of devices operatively coupled to the Webserver and carrying the distributed ledger;

wherein the Webserver is configured to transmit the authorized first and second cryptocurrency and/or digitally securitized asset transactions to the plurality of devices;

wherein the plurality of devices are configured to collectively validate the first and second cryptocurrency and/or digitally securitized asset transactions; and

wherein the Webserver is configured to receive and forward collective validation to the server computer.

~~80~~79. The computer system of claim ~~78~~77, wherein the server computer is further configured to:

receive a first cryptocurrency and/or digitally securitized asset transaction corresponding to the bid price from a buyer wallet to a transaction wallet via the Webserver; transmit a second cryptocurrency and/or digitally securitized asset transaction corresponding to the ask price from the transaction wallet to a seller wallet via the Webserver;

issue a distributed ledger token corresponding to the quantity of the natural resource; and cause the Webserver to transmit the token to the buyer wallet.