UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)
☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended **December 31, 2022**
or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ___________ to ____________

Commission File No. **0-15905**

BLUE DOLPHIN ENERGY COMPANY

(Exact name of registrant as specified in its charter)

Delaware	**73-1268729**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
801 Travis Street, Suite 2100, Houston, Texas	**77002**
(Address of principal executive offices)	(Zip Code)

713-568-4725
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, par value $0.01 per share
(Title of class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See the definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☒
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C.7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. Yes ☐ No ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). Yes ☐ No ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of shares of common stock held by non-affiliates of the registrant was $2,919,215 as of June 30, 2022 (the last trading day of the registrant's most recently completed second fiscal quarter) based on the number of shares of common stock held by non-affiliates and the last reported sale price of the registrant's common stock on June 30, 2022.

Number of shares of common stock, par value $0.01 per share, outstanding at April 3, 2023: 14,921,968

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Glossary of Terms

Glossary of Terms

Throughout this Annual Report on Form 10-K, we have used the following terms:

Affiliate. Refers, either individually or collectively, to certain related parties including Jonathan Carroll, Chairman and Chief Executive Officer of Blue Dolphin, and his affiliates (including Ingleside and Lazarus Capital) and/or LEH and its affiliates (including LMT and LTRI). Together, Jonathan Carroll and LEH owned approximately 83% of the Common Stock as of the filing date of this report.

AMT. Alternative Minimum Tax.

Amended Pilot Line of Credit. Line of Credit Agreement dated May 3, 2019, between Pilot and NPS and subsequently amended on May 9, 2019, May 10, 2019, and September 3, 2019, the last amendment being Amendment No. 1; original line of credit amount was $13.0 million; NPS repaid all obligations owed to Pilot in October 2021.

Amended and Restated Operating Agreement. Affiliate agreement between Blue Dolphin, LE, LRM, NPS, BDPL, BDPC, BDSC and LEH governing LEH's operation and management of those companies' assets; three-year term effective April 1, 2020 expiring April 1, 2023 or notice by either party at any time of material breach or 90 days Board notice; LEH receives management fee of 5% of all consolidated operating costs, excluding crude costs, depreciation, amortization, and interest, of Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and BDSC. Following expiration of the Amended and Restated Operating Agreement, the Second Amended and Restated Operating Agreement will become effective April 1, 2023.

ARO. Asset retirement obligations.

BDEC Term Loan Due 2051 (as modified). An EIDL dated May 4, 2021 between Blue Dolphin and the SBA in the original principal amount of $0.5 million; the note was modified in February 2022 to increase the principal amount by $1.5 million to $2.0 million; additional principal used for working capital; interest accrues at 3.75%; maturity date May 2051; monthly principal and interest payment $0.01 million; payments deferred first thirty (30) months; interest accrues during deferral period; first payment due November 2023; loan not forgivable; security includes all tangible and intangible personal property, including, but not limited to inventory, equipment, instruments, chattel paper, documents, letter of credit rights, accounts, deposit accounts, commercial tort claims, general intangibles, and as-extracted collateral; contains representations and warranties, affirmative and negative covenants, and events of default that are usual and customary for a credit facility of this type.

Board. Board of Directors of Blue Dolphin.

BOEM. Bureau of Ocean Energy Management.

BSEE. Bureau of Safety and Environmental Enforcement.

CAA. Clean Air Act.

Capacity utilization rate. A percentage measure that indicates the amount of available capacity used in the Nixon refinery. With respect to the crude distillation tower, the rate is calculated by dividing total refinery throughput or total refinery production on a bpd basis by the total capacity of the crude distillation tower (currently 15,000 bpd).

Assignment Agreement. Pursuant to an Assignment Agreement effective between LEH, Ingleside, and Lazarus Capital, the March Carroll Note and March Ingleside Note were assigned to LEH under the June LEH Note effective December 31, 2022.

ASU. Accounting Standards Update.

AGO. Atmospheric gas oil (also known as atmospheric tower bottoms) is the heaviest product boiled by a crude distillation tower operating at atmospheric pressure. This fraction ordinarily sells as distillate fuel oil, either in pure form or blended with cracked stocks. Certain ethylene plants, called heavy oil crackers, can take AGO as feedstock.

bbl. Barrel; a unit of volume equal to 42 U.S. gallons.

BDPC. Blue Dolphin Petroleum Company, a wholly owned subsidiary of Blue Dolphin.

BDPL. Blue Dolphin Pipe Line Company, a wholly owned subsidiary of Blue Dolphin.

BDPL-LEH Loan Agreement. Loan Agreement dated August 15, 2016, between BDPL and LEH in the original principal amount of $4.0 million; interest accrues at 16.00% annually; guaranteed by certain BDPL property; contains representations and warranties, affirmative and negative covenants, and events of default that are usual and customary for a credit facility of this type; matured August 2018; currently in default for failing to pay past due obligations at maturity.

BDSC. Blue Dolphin Services Co., a wholly owned subsidiary of Blue Dolphin.

BDSC-LEH Office Sub-Lease Agreement. Office sublease agreement in Houston, Texas between BDSC and LEH; sixty-eight-month (68) term effective January 1, 2018 expiring August 31, 2023; includes 6-month rent abatement period; rent approximately $0.003 million per month.

Blue Dolphin. Blue Dolphin Energy Company, one or more of its consolidated subsidiaries, or all of them taken as a whole.

bpd. Barrel per day; a measure of the bbls of daily output produced in a refinery or transported through a pipeline.

BDEC Guaranty Fee Agreement. Guaranty Fee Agreement effective January 1, 2023, between Blue Dolphin and Jonathan Carroll; related to payoff of BDEC Term Loan Due 2051; fee paid equal to 2.00% per annum of outstanding principal balance owed under BDEC Term Loan Due 2051; fees payable 100% in cash.

CARES Act. Coronavirus Aid, Relief and Economic Security Act, which was passed by Congress in March 2020, to provide economic assistance related to the onset of the COVID-19 pandemic.

CDC. Centers for Disease Control and Prevention.

CERLA. Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

CIP. Construction in progress.

COVID-19. An infectious disease caused by a coronavirus called SARS-CoV-2; first identified in 2019 in Wuhan, the capital of China's Hubei province; the disease spread globally, resulting in a pandemic.

Common Stock. Blue Dolphin common stock, par value $0.01 per share. Blue Dolphin has 20,000,000 shares of Common Stock authorized and 14,921,968 shares of Common Stock issued and outstanding as of the filing date of this report.

Complexity. A numerical score that denotes, for a given refinery, the extent, capability, and capital intensity of the refining processes downstream of the crude distillation tower. Refinery complexities range from the relatively simple crude distillation tower ("topping unit"), which has a complexity of 1.0, to the more complex deep conversion ("coking") refineries, which have a complexity of 12.0.

Condensate. Liquid hydrocarbons that are produced in conjunction with natural gas. Although condensate is sometimes like crude oil, it is usually lighter.

Cost of goods sold. Reflects the cost of crude oil and condensate, fuel use, and chemicals.

Crude distillation tower. A tall column-like vessel in which crude oil and condensate is heated and its vaporized components are distilled by means of distillation trays. This process refines crude oil and other inputs into intermediate and finished petroleum products; commonly referred to as a crude distillation unit or an atmospheric distillation unit.

Crude oil. A mixture of thousands of chemicals and compounds, primarily hydrocarbons. Crude oil quality is measured in terms of density (light to heavy) and sulfur content (sweet to sour). Crude oil must be broken down into its various components by distillation before use as fuels or conversion to other products.

Crude Supply Agreement. Crude Supply Agreement between Pilot and LE dated May 7, 2019, as amended on November 11, 2019, which agreement was assigned by Pilot to Tartan pursuant to an Assignment of Contract dated March 20, 2020.

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Glossary of Terms

CWA. Clean Water Act.

Depropanizer unit. A distillation column that is used to isolate propane from a mixture containing butane and other heavy components.

Distillates. The result of crude distillation and therefore any refined oil product. Distillate is more commonly used as an abbreviated form of middle distillate. There are mainly four (4) types of distillates: (i) very light oils or light distillates (such as naphtha), (ii) light oils or middle distillates (such as our jet fuel), (iii) medium oils, and (iv) heavy oils (such as our low-sulfur diesel and HOBM, reduced crude, and AGO).

Distillation. The first step in the refining process whereby crude oil and condensate are heated at atmospheric pressure in the base of a distillation tower. As the temperature increases, the various compounds vaporize in succession at their various boiling points and then rise to prescribed levels within the tower based on their densities (from lightest to heaviest). They then condense in distillation trays and are drawn off individually for further refining. Distillation is also used at other points in the refining process to remove impurities.

Downtime. Scheduled and/or unscheduled periods in which the crude distillation tower is not operating. Downtime may occur for a variety of reasons, including severe weather, power failures, and preventive maintenance.

EIA. Energy Information Administration.

Intercompany processing fees. Fees associated with an intercompany tolling agreement related to naphtha volumes.

Intermediate petroleum products. A petroleum product that might require further processing before being saleable to the ultimate consumer; further processing might be done by the producer or by another processor. Thus, an intermediate petroleum product might be a final product for one company and an input for another company that will process it further.

IRC Section 382. Title 26, Internal Revenue Code, Subtitle A – Income Taxes, Subchapter C – Corporate Distributions and Adjustments, Part V Carryovers, § 382. Limits NOL carryforwards and certain built-in losses following ownership change.

IRS. Internal Revenue Service.

Jet fuel. A high-quality kerosene product primarily used in aviation. Kerosene-type jet fuel (including Jet A and Jet A-1) has a carbon number distribution between 8 and 16 carbon atoms per molecule; wide-cut or naphtha-type jet fuel (including Jet B) has between 5 and 15 carbon atoms per molecule.

Jet Fuel Sales Agreement. Product agreement for the sale of jet fuel between LE and LEH; one-year term effective April 1, 2023 expiring earliest to occur of March 31, 2024, plus 30-day carryover, or delivery of maximum jet fuel quantity; LEH bids on jet fuel contracts under preferential pricing terms due to a

EIDL. Economic Injury Disaster Loan; provides economic relief to businesses that experienced a temporary loss of revenue due to COVID-19.

EPA. Environmental Protection Agency.

Eagle Ford Shale. A hydrocarbon-producing geological formation extending across South Texas from the Mexican border into East Texas.

Equipment Loan Due 2025. Installment sales contract dated October 13, 2020 between LE and Texas First in the original principal amount of $0.7 million; loan represents conversion of prior equipment (backhoe) rental agreement with option to purchase at maturity; interest accrues at 4.50%; maturity date October 2025; monthly principal and interest payment $0.0013 million; security includes first priority lien in the equipment; contains representations and warranties, affirmative and negative covenants, and events of default that are usual and customary for a credit facility of this type.

Exchange Act. Securities Exchange Act of 1934, as amended.

FASB. Financial Accounting Standards Board.

FDIC. Federal Deposit Insurance Corporation.

Feedstocks. Crude oil and other hydrocarbons, such as condensate and/or intermediate products, that are used as basic input materials in a refining process. Feedstocks are transformed into one or more finished products.

Finished petroleum products. Materials or products which have received the final increments of value through processing operations, and which are being held in inventory for delivery, sale, or use.

Freeport facility. Consists of processing units for: (i) crude oil and natural gas separation and dehydration, (ii) natural gas processing, treating, and redelivery, and (iii) vapor recovery; also includes two onshore pipelines and 162 acres of land in Freeport, Texas; facility is currently inactive.

GNCU. Greater Nevada Credit Union.

Greenhouse gases. Molecules in the Earth's atmosphere such as carbon dioxide, methane, and chlorofluorocarbons that warm the atmosphere because they absorb some of the thermal radiation emitted from the Earth's surface.

Gross profit (deficit). Calculated as total revenue less cost of goods sold; reflected as a dollar ($) amount.

HOBM. Heavy oil-based mud blendstock; see also "distillates."

HUBZone. Historically Underutilized Business Zones program established by the SBA to help small businesses in both urban and rural communities.

IBLA. Interior Board of Land Appeals.

INC. Incident of Noncompliance issued by BOEM and/or BSEE.

Ingleside. Ingleside Crude, LLC, an affiliate of Jonathan Carroll.

HUBZone certification; company expects contract to renew at substantially similar terms.

June LEH Note. June 2017 promissory note between Blue Dolphin and LEH; for Blue Dolphin working capital; reflects amounts owed to LEH under the Amended and Restated Operating Agreement; interest accrues at 8.00% compounded annually; no covenants; matured January 2019; currently in default for failing to pay past due obligations at maturity; pursuant to the Assignment Agreement, balances previously due under the March Carroll Note and March Ingleside Note were added to the balance due under the June LEH Note.

Kissick Debt. Loan agreement originally entered into between LE and Notre Dame Investors, Inc. in the original principal amount of $8.0 million; debt held by John Kissick as of the date of this report; pursuant to a 2017 sixth amendment, the Kissick Debt was amended to increase the principal amount by $3.7 million; the additional principal was used to reduce LE's prior obligation to GEL Tex Marketing, LLC, a Delaware limited liability company and an affiliate of Genesis Energy, LLC; under a 2015 subordination agreement, John Kissick agreed to subordinate his right to payments and security interest, as well as liens on the Nixon facility's business assets, in favor of Veritex as holder of the LE Term Loan Due 2034; security includes subordinated deed of trust that encumbers the crude distillation tower and general assets of LE; interest accrues at 16.00%; no covenants; matured January 2019.

Lazarus Capital. Lazarus Capital, LLC, an affiliate of Jonathan Carroll.

LE. Lazarus Energy, LLC, a wholly owned subsidiary of Blue Dolphin.

LE Amended and Restated Guaranty Fee Agreement. Amended and Restated Guaranty Fee Agreement dated April 1, 2017, between LE and Jonathan Carroll; related to payoff of LE Term Loan Due 2034; fee paid equal to 2.00% per annum of outstanding principal balance owed under LE Term Loan Due 2034; pursuant to an amendment effective January 1, 2023, fees payable 100% in cash.

LE-Ingleside Master Service Agreement. Master Service Agreement between LE and Ingleside effective March 1, 2023 for storage of product intended for customer receipt by barge; three-year term; tank rental $0.50 per bbl per month.

LE Term Loan Due 2034. Loan Agreement dated June 22, 2015, between LE, Veritex, and guarantors in the original principal amount of $25.0 million; Jonathan Carroll required to provide personal guarantee; interest accrues at WSJ Prime rate plus 2.75%; maturity date June 2034; monthly principal and interest payment $0.2 million; purpose of loan was loan refinance and Nixon facility capital improvements; security includes first priority lien on Nixon facility's business assets (excluding accounts receivable and inventory), assignment of all Nixon facility contracts, permits, and licenses, absolute assignment of Nixon facility rents and leases, including storage tank rental income, and a $0.5 million life insurance policy on Jonathan Carroll; contains representations and warranties, affirmative and negative covenants, and events of default that are usual and customary for a credit facility of this type; currently under Veritex Forbearance Agreement.

LE Term Loan Due 2050. An EIDL dated August 29, 2020 between NPS and the SBA in the original principal amount of $0.15 million; principal used for working capital; interest accrues at 3.75%; maturity date August 2050; monthly principal and interest payment $0.0007 million; payments deferred first thirty (30) months; interest accrued during deferral period; first payment made February 2023; loan not forgivable; security includes business assets (e.g., machinery and equipment, furniture, fixtures, etc.) as more fully described in the security agreement; contains representations and warranties, affirmative and negative covenants, and events of default that are usual and customary for a credit facility of this type.

LEH. Lazarus Energy Holdings, LLC, an affiliate of Jonathan Carroll and controlling shareholder of Blue Dolphin as of the date of this report.

LEH Operating Fee. A management fee paid to LEH under the Amended and Restated Operating Agreement; calculated as 5.00% of all consolidated operating costs, excluding crude costs, depreciation, amortization, and interest, of Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and BDSC; previously reflected within refinery operating expenses in our consolidated statements of operations.

Leasehold interest. The interest of a lessee under an oil and gas lease.

NPS. Nixon Product Storage, LLC, a wholly owned subsidiary of Blue Dolphin.

NPS Guaranty Fee Agreement. Guaranty Fee Agreement effective January 1, 2023, between NPS and Jonathan Carroll; related to payoff of NPS Term Loan Due 2031; fee paid equal to 2.00% per annum of outstanding principal balance owed under NPS Term Loan Due 2031; fees payable 100% in cash.

NPS-LEH Terminal Services Agreement. Terminal Services Agreement between NPS and LEH effective November 1, 2022 for the storage of jet fuel by LEH; one-year term with one-year automatic renewals; tank rental approximately $0.2 million per month.

Light crude. A liquid petroleum that has a low density and flows freely at room temperature. It has a low viscosity, low specific gravity, and a high American Petroleum Institute gravity due to the presence of a high proportion of light hydrocarbon fractions.

LMT. Lazarus Marine Terminal I, LLC, an affiliate of LEH.

LRM. Lazarus Refining & Marketing, LLC, a wholly owned subsidiary of Blue Dolphin.

LRM Amended and Restated Guaranty Fee Agreement. Amended and Restated Guaranty Fee Agreement dated April 1, 2017, between LRM and Jonathan Carroll; related to payoff of LRM Term Loan Due 2034; fee paid equal to 2.00% per annum of outstanding principal balance owed under LRM Term Loan Due 2034; pursuant to an amendment effective January 1, 2023, fees payable 100% in cash.

LRM Term Loan Due 2034. Loan Agreement dated December 4, 2015, between LRM, Veritex, and guarantors in the original principal amount of $10.0 million; Jonathan Carroll required to provide personal guarantee; interest accrues at WSJ Prime rate plus 2.75%; maturity date December 2034; monthly principal and interest payment $0.1 million; purpose of loan to refinance bridge loan and Nixon facility capital improvements; security includes second priority lien on rights of LE in crude distillation tower and other collateral of LE, first priority lien on real property interests of LRM, first priority lien on all LRM fixtures, furniture, machinery, and equipment, first priority lien on all LRM contractual rights, general intangibles, and instruments, except with respect to LRM rights in its leases of certain specified storage tanks for which Veritex has a second priority lien, and all other collateral as described in the security agreements; contains representations and warranties, affirmative and negative covenants, and events of default that are usual and customary for a credit facility of this type; currently under Veritex Forbearance Agreement.

LTRI. Lazarus Texas Refinery I, an affiliate of LEH.

March Carroll Note. March 2017 promissory note between Blue Dolphin and Lazarus Capital; reflects amounts owed to Jonathan Carroll under LE Amended and Restated Guaranty Fee Agreement and LRM Amended and Restated Guaranty Fee Agreement; interest accrues at 8.00% compounded annually; no covenants; matured January 2019; note assigned to LEH; see "Assignment Agreement."

March Ingleside Note. March 2017 promissory note between Blue Dolphin and Ingleside; represents periodic working capital to Blue Dolphin through conversion of accounts payable; interest accrues at 8.00% compounded annually; no covenants; matured January 2019; note assigned to LEH; see "Assignment Agreement."

Naphtha. A refined or partly refined light distillate fraction of crude oil. Blended further or mixed with other materials it can make high-grade motor gasoline or jet fuel. It is also a generic term applied to the lightest and most volatile petroleum fractions.

NAAQS. National Ambient Air Quality Standards.

Natural gas. A naturally occurring hydrocarbon gas mixture consisting primarily of methane, but commonly including varying amounts of other higher alkanes, and sometimes a small percentage of carbon dioxide, nitrogen, hydrogen sulfide, or helium.

Nixon facility. Encompasses the Nixon refinery, petroleum storage tanks, loading and unloading facilities, and 56 acres of land in Nixon, Texas.

Nixon refinery. The 15,000-bpd crude distillation tower and associated processing units in Nixon, Texas.

NOL. Net operating losses.

NPS Term Loan Due 2031. Loan Agreement dated September 20, 2021, between NPS, GNCU, and guarantors in the original principal amount of $10.0 million; Jonathan Carroll required to provide personal guarantee; interest accrues at 5.75%; maturity date October 2031; monthly principal and interest payment $0.1 million; interest-only payments first thirty-six (36) months; first principal payment due November 2024; purpose of loan working capital; security includes deed of trust lien on approximately 56 acres of land and improvements owned by LE, leasehold deed of trust lien on certain property leased by NPS from LE, and assignment of leases and rents and certain personal property; contains representations and warranties, affirmative and negative covenants, and events of default that are usual and customary for a credit facility of this type; currently in default; covenant violations relate to debt service coverage ratio, current ratio, and debt to net worth ratio.

NPS Term Loan Due 2050. An EIDL dated August 29, 2020 between NPS and the SBA in the original principal amount of $0.15 million; principal used for working capital; interest accrues at 3.75%; maturity date August 2050; monthly principal and interest payment $0.0007 million; payments deferred first thirty (30) months; interest accrued during deferral period; first payment made February 2023; loan not forgivable; security includes business assets (e.g., related machinery and equipment, furniture, fixtures, etc.) as more fully described in the security agreement; contains representations and warranties, affirmative and negative covenants, and events of default that are usual and customary for a credit facility of this type.

NSR/PSD. New Source Review/Prevention of Significant Deterioration.

OPA 90. Oil Pollution Act of 1990.

OPEC. Organization of Petroleum Exporting Countries.

Operating days. Represents the number of days in a period in which the crude distillation tower operated. Operating days are calculated by subtracting downtime in a period from calendar days in the same period.

OSHA. Occupational Safety and Health Administration.

OSRO. Oil Spill Response Organization.

Other conversion costs. Represents the combination of direct labor costs and manufacturing overhead costs. These are the costs that are necessary to convert our raw materials into refined products.

Other operating expenses. Represents costs associated with our natural gas processing, treating, and redelivery facility, as well as our pipeline assets and leasehold interests in oil and gas properties.

Petroleum. A naturally occurring flammable liquid consisting of a complex mixture of hydrocarbons of various molecular weights and other liquid organic compounds. The name petroleum covers both the naturally occurring unprocessed crude oils and petroleum products that are made up of refined crude oil.

PHMSA. Pipeline and Hazardous Materials Safety Administration of the U.S. Department of Transportation.

Pilot. Pilot Travel Centers LLC, a Delaware limited liability company.

Preferred Stock. Blue Dolphin preferred stock, par value $0.10 per share. Blue Dolphin has 2,500,000 shares of Preferred Stock authorized and no shares of Preferred Stock issued and outstanding as of the filing date of this report.

Product slate. Represents type and quality of products produced.

Propane. A by-product of natural gas processing and petroleum refining. Propane is one of a group of liquified petroleum gases. Others include butane, propylene, butadiene, butylene, isobutylene, and mixtures thereof.

Topping unit. A type of petroleum refinery that engages in only the first step of the refining process -- crude distillation. A topping unit uses atmospheric distillation to separate crude oil and condensate into constituent petroleum products. A topping unit has a refinery complexity range of 1.0 to 2.0.

Refined products. Hydrocarbon compounds, such as jet fuel and residual fuel, that are produced by a refinery.

Refinery. Within the oil and gas industry, a refinery is an industrial processing plant where crude oil, condensate, and intermediate feeds are separated and transformed into petroleum products.

Refining gross profit (deficit). Calculated as refinery operations revenue less total cost of goods sold during the period; reflected as a dollar ($) amount.

Refining gross profit (deficit) per bbl. Calculated as refinery operations revenue less total cost of goods sold divided by the volume, in bbls, of refined products sold during the period; reflected as a dollar ($) amount per bbl.

RCRA. Federal Resource Conservation and Recovery Act.

RFS. First Renewable Fuels Standard.

RFS2. Second Renewable Fuels Standard.

ROU. Right-of-use.

SBA. Small Business Administration.

SEC. Securities and Exchange Commission.

Second Amended and Restated Operating Agreement. Affiliate agreement between Blue Dolphin, LE, LRM, NPS, BDPL, BDPC, BDSC and LEH governing LEH's operation and management of those companies' assets; one-year term effective April 1, 2023 expiring April 1, 2024 or notice by either party at any time of material breach or 90 days Board notice; LEH receives management fee of 5.00% of all consolidated operating costs, excluding crude costs, depreciation, amortization, and interest, of Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and BDSC.

Securities Act. The Securities Act of 1933, as amended.

Segment contribution margin (deficit). For the refinery operations segment, represents refined product sales minus intercompany processing fees minus refinery operations costs and expenses. For the tolling and terminaling segment, represents storage tank rental and ancillary services fees plus intercompany processing fees minus tolling and terminaling costs and expenses. Intercompany processing fees are associated with an intercompany tolling agreement related to naphtha volumes.

Significant customer. A customer who represents more than 10% of our total revenue from operations.

Sour crude. Crude oil containing sulfur content of more than 0.5%.

Stabilizer unit. A distillation column intended to remove the lighter boiling compounds, such as butane or propane, from a product.

Sulfur. Present at various levels of concentration in many hydrocarbon deposits, such as petroleum, coal, or natural gas. Also, produced as a by-product of removing sulfur-containing contaminants from natural gas and petroleum. Some of the most commonly used hydrocarbon deposits are categorized based on their sulfur content, with lower sulfur fuels selling at a higher, premium price and higher sulfur fuels selling at a lower, discounted price.

Sweet crude. Crude oil containing sulfur content of less than 0.5%.

Tartan. Tartan Oil LLC, an affiliate of Pilot.

Texas First. Texas First Rentals, LLC.

TCEQ. Texas Commission on Environmental Quality.

Throughput. The volume processed through a unit or a refinery or transported through a pipeline.

TMT. Texas margins tax; a form of business tax imposed on an entity's gross profit rather than on its net income.

Total refinery production. Refers to the volume processed as output through the crude distillation tower. Refinery production includes finished petroleum products, such as jet fuel, and intermediate petroleum products, such as naphtha, HOBM and AGO.

Turnaround. Scheduled large-scale maintenance activity wherein an entire process unit, and sometimes the entire plant, is taken offline for a week or more for comprehensive revamp and renewal.

USACOE. U.S. Army Corps of Engineers.

USDA. U.S. Department of Agriculture.

U.S. GAAP. Accounting principles generally accepted in the United States of America.

Veritex. Veritex Community Bank, successor in interest to Sovereign Bank by merger.

Veritex Forbearance Agreement. Forbearance Agreement dated and effective November 18, 2022 between LE, LRM, Veritex, and guarantors (as defined therein); the forbearance period terminates September 30, 2023.

WHO. World Health Organization.

WSJ prime rate. A measure of the U.S. prime rate as defined by the Wall Street Journal.

XBRL. eXtensible Business Reporting Language.

Yield. The percentage of refined products that is produced from crude oil and other feedstocks.

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Important Information Regarding Forward-Looking Statements

Important Information Regarding Forward-Looking Statements

This report (including information incorporated by reference) contains "forward-looking statements" within the meaning of Section 27A of the Securities Act, and Section 21E of the Exchange Act, including, but not limited to, those under "Part I, Item 1. Business" and "Part I, Item 1A. Risk Factors," as well as "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations." All statements other than statements of historical fact, including without limitation statements regarding expectations regarding revenue, cash flows, capital expenditures, and other financial items, our business strategy, goals, and expectations concerning our market position, future operations, and profitability, are forward-looking statements. Forward-looking statements may be identified by use of the words "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "plan," "predict," "project," "will," "would" and similar terms and phrases. Although we believe our assumptions concerning future events are reasonable, several risks, uncertainties, and other factors could cause actual results and trends to differ materially from those projected, including but not limited to:

Business and Industry

- Our going concern status.
- Substantial debt in current liabilities, all of which is currently in default.
- Continued inability to meet financial covenants under secured loan agreements.
- Restrictive covenants in our debt instruments that limit our ability to undertake certain types of transactions.
- Increased costs of capital or a reduction in the availability of credit.
- Public health threats, pandemics, and epidemics, such as COVID-19, and the adverse impacts on our business, financial condition, results of operations, and liquidity.
- Affiliate Common Stock ownership and transactions that could cause conflicts of interest.
- Operational hazards inherent in transporting, processing, and storing crude oil and condensate and refined products.
- Geographical concentration of our assets and customers in West Texas.
- Competition from companies with more significant financial and other resources.
- Market changes in insurance that impact premium costs and available coverages.
- NOL carryforwards to offset future taxable income for U.S. federal income tax purposes that are subject to limitation.
- Industry technological developments that outpace our ability to keep up.

Downstream and Midstream Operations

- Commodity price and refined product demand volatility, which can adversely affect our refining margins.
- Crude oil, other feedstocks, and fuel and utility services price volatility.
- Availability and cost of crude oil and other feedstocks to operate the Nixon facility.
- Equipment failure and maintenance, which lead to operational downtime.
- Potential impairment in the carrying value of long-lived assets, which could negatively affect our operating results.
- Adverse changes in operational cash flow and working capital, shortfalls for which Affiliates may not fund.
- Critical personnel loss, labor actions, and workplace safety issues.
- Market share loss, an unfavorable financial condition shift, or the bankruptcy or insolvency of a significant customer.
- Increases in the cost or availability of third-party vessels, pipelines, trucks, and other means of delivering and transporting our crude oil and condensate, feedstocks, and refined products.
- Sourcing of a substantial amount, if not all, of our crude oil and condensate from the Eagle Ford Shale.
- Geographical concentration of our refining operations and customers within the Eagle Ford Shale.
- Severe weather or other climate-related events that affect our facilities or those of our vendors, suppliers, or customers.
- Failing to effectively execute new business strategies, such as renewable fuels.
- Our ability to effect and integrate potential acquisitions.

Legal, Government, and Regulatory

- Environmental laws and regulations that may require us to make substantial capital improvements to remain compliant or remediate current or future contamination that could lead to material liabilities.
- Strict laws and regulations regarding personnel and process safety.
- Uncertainty regarding the impact of current and future sanctions imposed by governments and other authorities, including the United States, the European Union, and the United Kingdom in response to the Russian military conflict with Ukraine.
- General economic, political, or regulatory developments, including recession, inflation, interest rates, or changes in governmental policies relating to refined petroleum products, crude oil, or taxation.
- Assessment of penalties by regulatory agencies, such as BOEM, BSEE, OSHA and the TCEQ for violations.
- Our estimates of future AROs related to our pipeline and facilities assets, which may increase.
- Regulatory changes and other measures related to greenhouse gas emissions, climate change, and an ongoing desire to transition to greater renewable energy solutions.

Security

- A terrorist attack or armed conflict.
- Increased activism against oil and gas companies.
- Actual or potential cybersecurity threats or loss of data privacy.

Common Stock

- Fluctuations in our stock price that may result in a substantial investment loss.
- Increasing attention to environmental, social, and governance (ESG) matters.
- Declines in our stock price due to share sales.
- Dilution of the equity of current stockholders and the potential decline of our stock price due to the issuance of new Common Stock or Preferred Stock from the large pool of authorized shares that we have available to issue.
- The potential sale of shares in accordance with Rule 144, which may adversely affect the market.
- The lack of dividend payments.
- Failing to maintain adequate internal controls under Section 404(a) of the Sarbanes-Oxley Act.

See also the risk factors described in greater detail under "Part I, Item 1A. Risk Factors" of this report.

All forward-looking statements included in this report are based on information available to us on the date of this report. We undertake no obligation to revise or update any forward-looking statements as a result of new information, future events, or otherwise.

Unless the context otherwise requires, references in this report to "Blue Dolphin," "we," "us," "our," or "ours" refer to Blue Dolphin Energy Company, one or more of its consolidated subsidiaries, or all of them taken as a whole.

Part I should be read in conjunction with "Part II, Item 7. Management's Discussion and Analysis and Results of Operations" and "Part II, Item 8. Financial Statements and Supplementary Data".

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PART I

ITEM 1. BUSINESS

The following section of this Annual Report on Form 10-K generally refers to business developments during the twelve months ended December 31, 2022. Discussion of, or references to, prior period business developments that are not included in this Form 10-K can be found in "Part I, Item 1. Business" of our Annual Report on Form 10-K for the year ended December 31, 2021.

Company Overview

Blue Dolphin was formed in 1986 as a Delaware corporation. The company is an independent downstream energy company operating in the Gulf Coast region of the United States. Operations primarily consist of a light sweet-crude, 15,000-bpd crude distillation tower, and approximately 1.2 million bbls of petroleum storage tank capacity in Nixon, Texas. Blue Dolphin trades on the OTCQX under the ticker symbol "BDCO."

Assets are organized in two business segments: 'refinery operations' (owned by LE) and 'tolling and terminaling services' (owned by LRM and NPS). 'Corporate and other' includes subsidiaries BDPL (inactive pipeline and facilities assets), BDPC (inactive leasehold interests in oil and gas wells), and BDSC (administrative services). For more information related to our business segments, see "Part I. Item 1. Business—Refinery Operations,—Tolling and Terminaling Operations, and — Inactive Operations" and "Part I. Item 2. Properties" in this report.

An Affiliate, combined with Jonathan Carroll, controlled approximately 83% of the voting power of our Common Stock as of the filing date of this report. An Affiliate also operates and manages all Blue Dolphin properties, funds working capital requirements during periods of working capital deficits, guarantees certain of our third-party secured debt, and is a significant customer of our refined products. Blue Dolphin and certain of its subsidiaries are currently parties to a variety of agreements with Affiliates. See "Part I, Item 1A. Risk Factors" and "Part II, Item 8. Financial Statements and Supplementary Data – Note (3)" for additional disclosures related to Affiliate agreements, arrangements, and risks associated with working capital deficits.

Going Concern

In accordance with GAAP accounting standards, we evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that our consolidated financial statements are issued. While results of operations were significantly improved for the twelve months ended December 31, 2022 versus the prior twelve month period, management determined that certain factors continue to present substantial doubt about our ability to continue as a going concern. These factors include significant current debt, which impacts our ability to meet debt covenants, and historical net losses and working capital deficits. Our consolidated financial statements assume we will continue as a going concern and do not include any adjustments that might result from this uncertainty. Management is working to alleviate these factors by entering into forbearance agreements with lenders, maximizing operation of the Nixon refinery given favorable refining margins, and pursuing opportunities to obtain capital and/or refinance debt.

Our significant current debt is the result of certain third-party and related-party loan agreements being classified within the current portion of long-term debt on our consolidated balance sheets at December 31, 2022 and 2021. Excluding accrued interest, we had current debt of $47.4 million and $63.0 million, respectively, as of December 31, 2022 and 2021. Our significant current debt consists of bank debt to Veritex and GNCU, investor debt to John Kissick, and related party debt to LEH.

Forbearance Agreement

Pursuant to the November 2022 Veritex Forbearance Agreement, Veritex agreed to forbear from exercising any of its rights and remedies related to existing defaults pertaining to covenant violations under the LE Term Loan Due 2034 and LRM Term Loan Due 2034 for a period beginning on November 18, 2022 through September 30, 2023. During the forbearance period, Veritex agreed to forbear from testing borrowers' compliance with financial covenants as specified in the LE Term Loan Due 2034 and LRM Term Loan Due 2034 and forbear from exercising its rights or remedies with respect to non-compliance with the financial covenants. As part of the Veritex Forbearance Agreement, LE and LRM paid Veritex: (i) $4.3 million in past due principal and interest at the non-default rate (excluding late fees), (ii) $1.0 million into a payment reserve account, and (iii) $0.04 million in Veritex attorney fees. In the event that LE and LRM pay off all amounts due under the LE Term Loan Due 2034 and LRM Term Loan Due 2034 on or before September 30, 2023, Veritex also agreed to waive late fees totaling approximately $0.4 million in the aggregate. The Veritex Forbearance Agreement shall terminate on the first to occur: September 30, 2023, failing to make a payment when due, breach, or any new event of default. As of December 31, 2022 and the filing date of this report, LE and LRM were in compliance with the Veritex Forbearance Agreement.

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Other Defaults

We are in default under the NPS Term Loan Due 2031 due to covenant violations. We are also in default under the Kissick Debt, June LEH Note, and BDPL-LEH Loan agreement related to past due obligations at maturity. Defaults permit the lender to declare the amounts owed under the related loan agreements immediately due and payable, exercise their rights with respect to collateral securing obligors' obligations, and/or exercise any other rights and remedies available.

Favorable Refining Margins

The strong demand for our products, particularly jet fuel, and the increase in refining margins were the primary contributors to us reporting $32.9 million in net income for the twelve months ended December 31, 2022. Comparatively, we reported a net loss of $12.8 million for the twelve months ended December 31, 2021. Our operating results for 2022, including operating results by segment, can be found within 'Results of Operations' in "Part II, Item 7. Management's Discussion and Financial Analysis of Financial Condition and Results of Operations" in this report.

Our results of operations and liquidity are highly dependent upon the margins that we receive for our refined products. The dollar per bbl commodity price difference between crude oil and condensate (input) and refined products (output) is the most significant driver of refining margins, and they have historically been subject to wide fluctuations. While refining margins and liquidity improved significantly during 2022, the general outlook for the oil and natural gas industry for 2023 remains unclear given uncertainty surrounding the Russian military conflict with Ukraine, COVID-19, recession, and inflation. We can provide no assurances that refining margins and demand will remain at current levels.

Working Capital Improvements

Historically, we experienced net losses during three of the last five years. We had $45.2 million and $78.5 million in working capital deficits at December 31, 2022 and 2021, respectively. Excluding the current portion of long-term debt, we had $2.1 million in working capital and $15.5 million in working capital deficits at December 31, 2022 and 2021, respectively. The significant improvement in working capital between the twelve-month periods ended December 31, 2022 and 2021 was primarily due to favorable refining margins and increased gross profit. Continued favorable market conditions will enable us to continue meeting our needs through cash flow from operations. We also continue to explore opportunities to obtain capital and/or refinance debt. During the twelve months ended December 31, 2022 and 2021, we successfully secured $1.5 million and $10.5 million, respectively, in working capital through CARES Act loans. In October 2021, NPS repaid all obligations owed to Pilot under the Amended Pilot Line of Credit.

Our ability to continue as a going concern depends on sustained positive operating margins and adequate working capital for, amongst other requirements, purchasing crude oil and condensate and making payments on long-term debt. If we are unable to process crude oil and condensate into sellable refined products or make required debt payments, we may consider other options. These options could include selling assets, raising additional debt or equity capital, cutting costs, reducing cash requirements, restructuring debt obligations, or filing bankruptcy.

Operating Risks

Successful execution of our business strategy depends on several critical factors, including having adequate working capital, favorable refining margins, and maintaining operation of the Nixon refinery.

- Working Capital – As noted above, we have historically had working capital deficits primarily due to having significant current debt. Having sufficient working capital is necessary to meet contractual, operational, regulatory, and safety needs. Our short-term working capital needs are primarily related to: (i) purchasing crude oil and condensate to operate the Nixon refinery, (ii) reimbursing LEH for direct operating expenses and paying the LEH operating fee under the Amended and Restated Operating Agreement, (iii) servicing debt, (iv) maintaining and improving the Nixon facility through capital expenditures, and (v) meeting regulatory compliance requirements. Our long-term working capital needs are primarily related to repayment of long-term debt obligations. To avoid business disruptions and manage cash flow, we optimize receivables and payables by prioritizing payments, optimize inventory levels based on demand, monitor discretionary spending, and carefully manage capital expenditures.
- Refining Margins – Refining margins, which are affected by commodity prices and refined product demand, are volatile, and a reduction in refining margins will adversely affect the amount of cash we will have available for working capital. Crude oil refining is primarily a margin-based business. To improve margins, we must maximize yields of higher value finished petroleum products and minimize costs of feedstocks and operating expenses. When the spread between these commodity prices decreases, our margins are negatively affected. Although an increase or decrease in the commodity price for crude oil and other feedstocks generally results in a similar increase or decrease in commodity prices for finished petroleum products, typically there is a time lag between the two. The effect of crude oil commodity price changes on our finished petroleum product commodity prices therefore depends, in part, on how quickly and how fully the market adjusts to reflect these changes. Unfavorable margins may have a material adverse effect on our earnings, cash flows, and liquidity. To remain competitive in a volatile commodity price environment, we adjust throughput and production based on market conditions and adjust our product slate based on commodities pricing.

- Nixon Refinery Operation – We maintain relationships with suppliers that source and repair key components of the Nixon refinery. We expect our suppliers to maintain an adequate supply of component products and, when components are sent out for repair, to timely deliver components. However, in some cases, increases in demand or supply chain disruptions have led to part and component constraints. We use several suppliers and monitor supplier financial viability to mitigate supply-based risks that could cause a business disruption.

The Russian military conflict with Ukraine, COVID-19, recession, and inflation continue to evolve, and the extent to which these factors may impact working capital, commodity prices, refined product demand, our supply chain, financial condition, liquidity, results of operations, and future prospects will depend on future developments, which cannot be predicted with any degree of confidence. We can provide no guarantees that: our business strategy will be successful, Affiliates will continue to fund our working capital needs when we experience working capital deficits, we will meet regulatory requirements to provide additional financial assurance (supplemental pipeline bonds) and decommission offshore pipelines and platform assets, we can obtain additional financing on commercially reasonable terms or at all, or margins on our refined products will be favorable. Further, if third parties exercise their rights and remedies under secured loan agreements that are in default, or if Tartan terminates the Crude Supply Agreement, our business, financial condition, and results of operations will be materially adversely affected.

Downstream Operations

The refinery operations business segment consists of the following assets and operations:

Property	Key Products Handled	Operating Subsidiary	Location
Nixon facility · Crude distillation tower (15,000 bpd) · Petroleum storage tanks · Loading and unloading facilities · Land (56 acres)	Crude Oil Refined Products	LE	Nixon, Texas

Crude Oil and Condensate Supply. Operation of the Nixon refinery depends on our ability to purchase adequate amounts of crude oil and condensate. We have a long-term crude supply agreement in place with Tartan. The volume-based Crude Supply Agreement expires when we receive 24.8 million net bbls of crude oil. After that, the Crude Supply Agreement automatically renews for successive one-year terms (each such term, a renewal term). Tartan must provide notice of non-renewal at least 60 days before the expiration of any renewal term. For the twelve months ended December 31, 2022 and 2021, we received approximately 4.5 million bbls, or 18.4%, and 4.2 million bbls, or 17.0%, respectively, of the contracted volume under the Crude Supply Agreement. As of December 31, 2022, we received approximately 13.6 million bbls, or 54.8%, of the total allowable contracted volume under the Crude Supply Agreement. At December 31, 2022, accounts payable for crude oil and condensate was $0. As of December 31, 2022, 100% of our crude oil was sourced from Tartan under the Crude Supply Agreement.

Related to the Crude Supply Agreement, Tartan stores crude oil at the Nixon facility under a terminal services agreement dated as of June 1, 2019. Under the terminal services agreement, crude oil is stored at the Nixon facility at a specified rate per bbl of the storage tank's shell capacity. The terminal services agreement renews on a one-year evergreen basis. Tartan must provide notice of non-renewal at least 60 days before the expiration of any renewal term. However, the terminal services agreement will automatically terminate upon expiration or termination of the Crude Supply Agreement.

Our financial health has been materially and adversely affected by significant current debt, certain of which is in default, historical net losses and working capital deficits, and margin volatility. If Tartan terminates the Crude Supply Agreement or terminal services agreement, our ability to acquire crude oil and condensate could be adversely affected. If producers experience crude supply constraints and increased transportation costs, our crude acquisition costs may rise, or we may not receive sufficient amounts to meet our needs, which would result in refinery downtime and could materially affect our business, financial condition, and results of operations. To mitigate this risk, we are exploring other crude supply sources.

Products and Markets. Our market is the Gulf Coast region of the U.S., which is represented by the EIA as Petroleum Administration for PADD 3. We sell our products primarily in the U.S. within PADD 3. Occasionally, we sell refined products to customers that export to other countries, such as low sulfur diesel to Mexico.

The Nixon refinery's product slate is adjusted based on market demand. We currently produce a single finished product – jet fuel – and several intermediate products, including naphtha, HOBM, and AGO. Our jet fuel is sold to an Affiliate, which is HUBZone certified. The product sales agreement with the Affiliate has a one-year term expiring the earliest to occur of March 31, 2024 plus 30-day carryover or delivery of the maximum quantity of jet fuel. Our intermediate products are primarily sold in nearby markets to wholesalers and refiners as a feedstock for further blending and processing.

Customers. Customers for our refined products include distributors, wholesalers, and refineries primarily in the lower portion of the Texas Triangle (the Houston – San Antonio – Dallas/Fort Worth area). We have bulk term contracts in place with most of our customers, including month-to-month, six months, and up to one-year terms. Certain of our contracts require our customers to prepay and us to sell fixed quantities and/or minimum quantities of finished and intermediate petroleum products. Many of these arrangements are subject to periodic renegotiation on a forward-looking basis, which could result in higher or lower relative prices on future sales of our refined products.

Competition. Many of our competitors are substantially larger than us and are engaged on a national or international level in many segments of the oil and gas industry, including exploration and production, gathering and transportation, and marketing. These competitors may have greater flexibility in responding to or absorbing market changes occurring in one or more of these business segments. We compete primarily based on cost. Due to the low complexity of our simple "topping unit" refinery, we can be nimble in adjusting our refined products slate because of changing commodity prices, market demand, and refinery operating costs.

Safety and Downtime. We operate the refinery in a manner that is materially consistent with industry safety practices and standards. EPA, OSHA, and comparable state and local regulatory agencies provide oversight for personnel safety, process safety management, and risk management to prevent or minimize the accidental release of toxic, reactive, flammable, or explosive chemicals. Most of our storage tanks are equipped with leak detection devices. We also have response and control plans in place for spill prevention and emergencies.

The Nixon refinery periodically undergoes planned and unplanned temporary shutdowns. We typically complete a planned turnaround annually to repair, restore, refurbish, or replace refinery equipment. However, the timing of planned turnarounds is adjusted to capitalize on favorable market conditions. Occasionally, unplanned shutdowns occur. Unplanned downtime can occur for a variety of reasons; however, common reasons for unplanned downtime include repair/replacement of disabled equipment, crude deficiencies associated with cash constraints, high temperatures, and power outages. In 2021, the Nixon refinery did not incur significant damage due to Winter Storm Uri; however, the facility lost external power for 10 days due to the storm. In December 2022, the Nixon refinery was idled for 5 days due to an unnamed winter ice storm.

We are particularly vulnerable to operation disruptions because all our refining operations occur at a single facility. Any scheduled or unscheduled downtime results in lost margin opportunity, reduced refined products inventory, and potential increased maintenance expense, all of which could reduce our ability to meet our payment obligations.

Midstream Operations

Our tolling and terminaling segment consists of the following assets and operations:

Property	Key Products Handled	Operating Subsidiary	Location
Nixon facility · Petroleum storage tanks (third-party leasing) · Loading and unloading facilities	Crude Oil Refined Products	LRM, NPS	Nixon, Texas

Products and Customers. The Nixon facility's petroleum storage tanks and infrastructure are primarily suited for crude oil and condensate and refined products, such as naphtha, jet fuel, diesel, and fuel oil. Storage customers are typically refiners in the lower portion of the Texas Triangle (the Houston – San Antonio – Dallas/Fort Worth area). Shipments are received and redelivered from within the Nixon facility via pipeline or from third parties via truck. Contract terms range from month-to-month to three years.

Operations Safety. Our midstream operations are operated in a manner materially consistent with industry safe practices and standards. These operations are subject to OSHA regulations and comparable state and local regulators. Storage tanks used for terminal operations are designed for crude oil and condensate and refined products, and most are equipped with appropriate controls that minimize emissions and promote safety. Our terminal operations have response and control plans, spill prevention and other programs to respond to emergencies.

Inactive Operations

We own other pipeline and facilities assets and have leasehold interests in oil and gas properties. These assets are inactive. We account for these inactive operations in 'corporate and other.' Our pipeline assets have been fully impaired since 2016 and our oil and gas leasehold interests have been fully impaired since 2011. Our pipeline assets and oil and gas leasehold interests had no revenue during the twelve months ended December 31, 2022 and 2021.

Property	Operating Subsidiary	Location
Freeport facility	BDPL	Freeport, Texas
· Crude oil and natural gas separation and dehydration		
· Natural gas processing, treating, and redelivery		
· Vapor recovery unit		
· Two onshore pipelines		
· Land (162 acres)		
Offshore Pipelines (Trunk Line and Lateral Lines)	BDPL	Gulf of Mexico
Oil and Gas Leasehold Interests	BDPC	Gulf of Mexico

Pipeline and Facilities Safety.
Although our pipeline and facility assets are inactive, they require upkeep and maintenance and are subject to safety regulations under OSHA, PHMSA, BOEM, BSEE, and comparable state and local regulators. We have response and control plans, spill prevention and other programs to respond to emergencies related to these assets.

Insurance and Risk Management

Our operations are subject to significant hazards and risks inherent in crude oil and condensate refining operations, as well as the transportation and storage of crude oil and condensate and refined products. We have property damage, business interruption, and pollution liability coverages at the Nixon facility. Business interruption coverage is for 24 months from the date of the loss, subject to a deductible with a 45-day waiting period. Pollution liability provides coverage due to named perils for claims involving pollutants where the discharge is sudden, accidental, and first commences at a specific day and time during the policy period. The pollution policy is subject to a retention and deductible and contains discovery requirements, reporting requirements, exclusions, definitions, conditions, and limitations that could apply to a particular pollution claim. As a result, there can be no assurance such claim will be adequately insured for all potential damages.

Additional coverage includes umbrella, excess liability, workers' compensation, directors' and officers' liability, environmental liability, and other business risks. These coverages are supported by safety and other risk management programs. Our insurance program may not cover all operational risks and costs and may not provide sufficient coverage in the event of a claim. We do not maintain insurance coverage against all potential losses and could suffer losses for uninsurable or uninsured risks or in amounts in excess of existing insurance coverage. Losses in excess of our insurance coverage or cancellation of policies could have a material adverse effect on our business, financial condition, and results of operations.

Intellectual Property

We rely on intellectual property laws to protect our brand, as well as those of our subsidiaries. "Blue Dolphin Energy Company" is a registered trademark in the U.S. in name and logo form. "Petroport, Inc." is a registered trademark in the U.S. in name form. In addition, "www.blue-dolphin-energy.com" is a registered domain name.

Website Access to Reports and Other Information

We make certain filings with the SEC, including our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments and exhibits to those reports, which are available free of charge through the SEC's website (http://www.sec.gov) or through our website (http://www.blue-dolphin-energy.com), as soon as reasonably practicable after they are filed with the SEC. We have also posted our Code of Business Ethics, board committee charters and other corporate governance documents on our website. Our website and the information contained on that site, or connected to that site, are not incorporated by reference into this report.

Human Capital Management

General. Our operations and activities are managed by an Affiliate. We do not have any employees. As of December 31, 2022, 116 employees of the Affiliate provided support for our operations pursuant to the Amended and Restated Operating Agreement. None of these employees were covered by collective bargaining agreements. Under the Amended and Restated Operating Agreement, the Affiliate operates and manages all of our properties.

We believe that our personnel provide a competitive advantage for our success. We seek to foster a culture that supports diversity and inclusion, and we strive to provide a safe, healthy, and rewarding work environment for our personnel.

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Safety, Health, and Wellness. We must comply with a number of federal and state laws and regulations related to safety that protect the health and safety of our workforce. We operate a safety and health program with participation by personnel at all levels of the organization. In 2022, we implemented eCompliance, a mobile software solution that increases frontline adoption of health and safety policies and reduces on-site risks. Despite our efforts to achieve excellence in our safety and health performance, there can be no assurances that there will not be accidents resulting in injuries or even fatalities.

We have developed and implemented a COVID-19 mitigation plan based on CDC and state health guidelines. This plan includes the implementation of health-screening protocols, elevated cleaning measures, reduced shared spaces, the purchase of masks for all personnel for use when social-distancing measures are not possible, and providing work-from-home support to facilitate remote working. Although vaccines have not been mandated, we have actively communicated updates to our workforce regarding vaccine availability and have encouraged eligible personnel to get vaccinated.

Inclusion and Diversity. We continue to evaluate measures to put in place and track our progress with regard to diversity and inclusion. As of December 31, 2022, employees of the Affiliate self-identified as 38% White, 37% Hispanic Latino, 18% Black or African American, and 1% Asian.

Government Regulations

General. Our operations are subject to extensive and frequently changing federal, state, and local laws, regulations, permits, and ordinances relating to the protection of the environment. Among other things, these laws and regulations govern obtaining and maintaining construction and operating permits, the emission and discharge of pollutants into or onto the land, air, and water, the handling and disposal of solid, liquid, and hazardous wastes and the remediation of contamination. Compliance with existing and anticipated environmental laws and regulations increases our overall cost of business, including our capital costs to construct, maintain, operate, and upgrade equipment and facilities. Failing to comply with these laws and regulations may trigger a variety of administrative, civil, and criminal enforcement measures, including the assessment of monetary penalties. Certain environmental statutes impose strict, joint and several liability for costs required to clean up and restore sites where hazardous substances, hydrocarbons or wastes have been disposed or otherwise released. Moreover, it is not uncommon for neighboring landowners and other third parties to file claims for personal injury and property damage allegedly caused by the release of hazardous substances, hydrocarbons, or other waste products into the environment. These requirements may also significantly affect our customers' operations and may have an indirect effect on our business, financial condition, and results of operations. However, we do not expect such effects will have a material impact on our financial position, results of operations, or liquidity.

Air Emissions and Climate Change Regulations. Our operations are subject to the CAA and comparable state and local statutes. Under these laws, we are required to obtain permits, as well as test, monitor, report, and implement control requirements. If regulations become more stringent, additional emission control technologies may be required to be installed at the Nixon facility and certain emission sources located offshore, and our ability to secure future permits may become less certain. Any such future obligations could require us to incur significant additional capital or operating costs.

The EPA has undertaken significant regulatory initiatives under authority of the CAA's NSR/PSD program to further reduce emissions of volatile organic compounds, nitrogen oxides, sulfur dioxide, and particulate matter. These regulatory initiatives have been targeted at industries with large manufacturing facilities that are significant sources of emissions, such as refining, paper and pulp, and electric power generating industries. The basic premise of these initiatives is the EPA's assertion that many of these industrial establishments have modified or expanded their operations over time without complying with NSR/PSD regulations, which result in emission increases above threshold limits. As part of this ongoing NSR/PSD regulatory initiative, the EPA has consent decrees with several refiners that require refiners to make significant capital expenditures to install emissions control equipment at selected facilities. We are not under a consent decree. If selected, as a small refiner we do not expect any additional requirements to have a material impact on our financial position, results of operations, or liquidity.

The EPA strengthened the NAAQS for ground-level ozone to 70 parts per billion in 2015 from the 75-parts per billion level set in 2008. To implement the revised ozone NAAQS, all states will need to review their existing air quality management infrastructure State Implementation Plan for ozone and ensure it is appropriate and adequate. Where areas remain in ozone non-attainment or come into ozone non-attainment as a result of the revised NAAQS, it is likely that additional planning and control obligations will be required. States may impose additional emissions control requirements on stationary sources, changes in fuels specifications, and changes in fuels mix and mobile source emissions controls. The ongoing and potential future requirements imposed by states to meet the ozone NAAQS could have direct impacts on terminaling facilities through additional requirements and increased permitting costs and could have indirect impacts through changing or decreasing fuel demand.

Pursuant to the Energy Policy Act of 2005 and Energy Independence and Security Act of 2007, the EPA promulgated RFS and RFS2, respectively, which requires obligated parties, defined by the EPA as refiners or importers of transportation fuels, to either blend "renewable fuels," such as ethanol and biofuels, into their transportation fuels or purchase renewable fuel credits, known as renewable identification numbers, in lieu of blending. The EPA granted the Nixon refinery a small refinery exemption from RFS2 requirements for 2013 and 2014. In 2014, the Nixon refinery began producing HOBM, a non-transportation lubricant blend product that does not fall under RFS or RFS2 compared to low sulfur diesel.

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Currently, multiple legislative and regulatory measures to address greenhouse gas emissions are in various phases of discussion or implementation. These include actions to develop national, state, or regional programs, each of which would require reductions in our greenhouse gas emissions or those of our customers. In 2015, the EPA amended the Petroleum and Natural Gas Systems source category (Subpart W) of the Greenhouse Gas Reporting Program, to include among other things a new Onshore Petroleum and Natural Gas Gathering and Boosting segment that encompasses greenhouse gas emissions from equipment and sources within the petroleum and natural gas gathering boosting systems. In 2016, the EPA promulgated regulations regarding performance standards for methane emissions from new and modified oil and gas production and natural gas processing and transmission facilities, and in September 2018, proposed targeted improvements to these standards to streamline implementation of the rules. These and other legislative regulatory measures will impose additional burdens on our business and those of our customers.

In 2021, the Biden Administration signaled that it will take steps intended to address climate change. In January 2021, the White House issued an Executive Order titled "*Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*," as well as a formal notification re-accepting the United States' re-entry into the Paris Agreement. Also in January 2021, the White House issued another climate-related Executive Order, titled "*Tackling the Climate Crisis at Home and Abroad*." In April 2021, the Biden Administration announced a new target for the United States to achieve a 50 to 52 percent reduction from 2005 levels in economy-wide net greenhouse gas emissions in 2030. The EPA's approach to regulating GHG emissions may change, including under future administrations. Therefore, future impact of the Biden Administration's executive orders and future GHG regulations on our operations and financial condition is unknown.

Hazardous Substances and Waste Regulations. The CERCLA imposes strict, joint and several liability on a broad group of potentially responsible parties for response actions necessary to address a release of hazardous substances into the environment. The law authorizes two kinds of response actions: (i) short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response, and (ii) long-term remedial response actions, that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening. Neither we nor any of our predecessors have been designated as a potentially responsible party under CERCLA or a similar state statute.

We are subject to RCRA requirements for the generation, transportation, treatment, storage, and disposal of solid and hazardous wastes. When feasible, RCRA-regulated materials are recycled instead of being disposed of on-site or off-site. RCRA establishes standards for the management of solid and hazardous wastes. We generate petroleum product wastes, solid wastes, and ordinary industrial wastes, such as from paints and solvents, that are regulated under RCRA and comparable state statues.

Besides governing current waste disposal practices, RCRA also addresses the environmental effects of certain past waste disposal practices. We currently own properties where crude oil, refined petroleum hydrocarbons, and fuel additives have been handled for many years by previous owners. At some sites, hydrocarbons or other waste may have been disposed of or released on or under the properties owned by us or on or under other locations where these wastes have been taken for disposal. Although prior owners and operators may have used operating and waste disposal practices that were standard in the industry at the time, these properties and wastes disposed thereon are now subject to CERCLA, RCRA and analogous state laws. Under these laws, we could be required to remove or remediate previously disposed or released wastes (including wastes disposed of or released by prior owners or operators), to clean up contaminated property (including impacted groundwater), or to perform remedial operations to prevent future contamination to the extent we are not indemnified for such matters.

Water Pollution Regulations. Our operations can result in the discharge of pollutants, including chemical components of crude oil and refined products, into federal and state waters. The CWA prohibits the discharge of pollutants into U.S. waters except as authorized by the terms of a permit issued by the EPA or a state agency with delegated authority. The transportation and storage of crude oil and refined products over and adjacent to water involves risks and subjects us to the provisions of the CWA, OPA 90, and related state requirements.

Spill prevention, control, and countermeasure requirements mandate the use of structures, such as berms and other secondary containment, to prevent hydrocarbons or other pollutants from reaching a jurisdictional body of water in the event of a spill or leak. These requirements prevent pollutant releases and minimize potential impacts should a release occur. We have federally certified OSROs available to respond to a spill and, in the case of our offshore pipelines, we maintain the statutory $35.0 million coverage required proof of financial responsibility. In the event of an oil spill into navigable waters, we can be subject to strict, joint, and potentially unlimited liability for removal costs and other consequences.

Wastewater is subject to restrictions and strict controls under the CWA. Federal and state regulatory agencies can impose administrative, civil, and criminal penalties for non-compliance with discharge permits. Process wastewater from the Nixon refinery is tested and discharged to a nearby municipal treatment facility pursuant to applicable process wastewater permits. Wastewater from our offshore facilities, including our oil and natural gas pipelines and anchor platform, is tested and discharged pursuant to applicable produced water permits. Stormwater at the Nixon facility is tested and discharged pursuant to applicable stormwater permits.

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Offshore "Idle Iron" Decommissioning Regulations. In 2018 BSEE updated its guidance and regulations on decommissioning that mandates lessees and rights-of-way holders permanently abandon and/or remove platforms and other structures when no longer useful for operations. To cover the various obligations of lessees and rights-of-way holders operating in federal waters of the Gulf of Mexico, BOEM evaluates an operator's financial ability to carry out present and future obligations to determine whether the operator must provide additional security beyond the minimum bonding requirements. Such obligations include the cost of plugging and abandoning wells and decommissioning and removing platforms and pipelines at the end of production or service activities. Once plugging and abandonment work has been completed, the collateral backing the financial assurance is released by BOEM.

We are required by BOEM to: (i) maintain acceptable financial assurance (pipeline bonds) for the decommissioning of our assets offshore in federal waters and (ii) decommission these assets following a certain period of inactivity. As of December 31, 2022, we maintained approximately $0.9 million in credit and cash-backed pipeline rights-of-way bonds issued to the BOEM. At December 31, 2022 and 2021, BDPL maintained $3.7 and $3.5 million, respectively, in AROs related to abandonment of these assets. See "Part I, Item 1A. Risk Factors" for additional disclosures related to idle iron decommissioning requirements for our pipelines and facilities assets and related risks.

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ITEM 1A. RISK FACTORS

You should carefully consider the risks described below, in addition to the other information contained in this document. Realization of any of the following risks could have a material adverse effect on our business, financial condition, cash flows and results of operations.

A. Risks Related to Our Business and Industry

A1. Management has determined that there is, and the report of our independent registered public accounting firm expresses, substantial doubt about our ability to continue as a going concern.

In accordance with GAAP accounting standards, we evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that our consolidated financial statements are issued. While results of operations were significantly improved for the twelve months ended December 31, 2022 versus the prior twelve month period, management determined that certain factors continue to present substantial doubt about our ability to continue as a going concern. These factors include significant current debt, which impacts our ability to meet debt covenants, and historic net losses and working capital deficits. Our consolidated financial statements assume we will continue as a going concern and do not include any adjustments that might result from the outcome of this uncertainty. Management is working to alleviate these factors by entering into forbearance agreements with lenders, maximizing operation of the Nixon refinery given favorable refining margins, and pursing opportunities to obtain capital and/or refinance debt. However, a 'going concern' opinion could impair our ability to finance our operations through the sale of equity, incurring debt, or other financing alternatives. Our ability to continue as a going concern depends on sustained positive operating margins and having working capital for, amongst other requirements, purchasing crude oil and condensate and making payments on long-term debt. Without positive operating margins and working capital, our business will be jeopardized, and we may not be able to continue. If we are unable to make required debt payments, we would likely have to consider other options, such as selling assets, raising additional debt or equity capital, cutting costs, or otherwise reducing our cash requirements, or negotiating with our creditors to restructure our applicable obligations, including potentially filing for bankruptcy.

As discussed in Risk Factor A2, we have significant current debt. Our significant current debt is the result of certain third-party and related-party loan agreements being classified within the current portion of long-term debt on our consolidated balance sheets at December 31, 2022 and 2021. Excluding accrued interest, we had current debt of $47.4 million and $63.0 million, respectively, as of December 31, 2022 and 2021. Our significant current debt consists of bank debt to Veritex and GNCU, investor debt to John Kissick, and related-party debt to LEH. As discussed in Risk Factor A3, we are in default under the NPS Term Loan Due 2031 due to covenant violations. We are also in default under the Kissick Debt, June LEH Note, and BDPL-LEH Loan Agreement related to past due obligations at maturity. Defaults permit the lender to declare the amounts owed immediately due and payable, exercise their rights with respect to collateral securing obligors' obligations under these loan agreements, and/or exercise any other rights and remedies available.

We currently rely on revenue from operations, including sales of refined products and rental of petroleum storage tanks, Affiliates, and financing to meet our liquidity needs. Our short-term working capital needs are primarily related to: (i) purchasing crude oil and condensate to operate the Nixon refinery, (ii) reimbursing LEH for direct operating expenses and paying the LEH operating fee under the Amended and Restated Operating Agreement, (iii) servicing debt, (iv) maintaining and expanding the Nixon facility through capital expenditures, and (v) meeting regulatory compliance mandates. Our long-term working capital needs are primarily related to repayment of long-term debt obligations.

Due to significant current debt, which impacts our ability to meet debt covenants, and historic net losses and working capital deficits, we may have inadequate liquidity to sustain operations. We continue to explore opportunities to obtain capital and/or refinance debt. During the twelve months ended December 31, 2022 and 2021, we successfully secured $1.5 million and $10.5 million, respectively, in working capital through CARES Act loans. In October 2021, NPS repaid all obligations owed to Pilot under the Amended Pilot Line of Credit. There can be no assurance that we will be able to raise additional capital on acceptable terms, or at all. If we are unable to raise sufficient additional capital, we may not, in the short term, be able to purchase crude oil and condensate or meet debt payment obligations. In the long term, we may not be able to withstand business disruptions, such as from the Russian-Ukrainian war, COVID-19, recession, and inflation or execute our business strategy. We may have to consider other options, such as selling assets, raising additional debt or equity capital, seek bankruptcy protection, or cease operating.

A2. Our significant current debt could adversely affect our financial health and make us more vulnerable to adverse economic conditions.

As described elsewhere in this report, our significant current debt is the result of certain third-party and related-party loan agreements being in default. As a result, these debt obligations were classified within the current portion of long-term debt on our consolidated balance sheets at December 31, 2022 and 2021. Excluding accrued interest, we had current debt of $47.4 million and $63.0 million, respectively, as of December 31, 2022 and 2021. Our significant current debt consists of bank debt to Veritex and GNCU, investor debt to John Kissick, and related-party debt to LEH.

Blue Dolphin, as parent company, has guaranteed the indebtedness of certain subsidiaries. In addition, Affiliates have guaranteed the indebtedness of Blue Dolphin and certain of its subsidiaries. This level of debt in current liabilities and the cross guarantee agreements could have important consequences, such as: (i) limiting our ability to obtain additional financing to fund our working capital, capital expenditures, debt service requirements or potential growth, or for other purposes; (ii) increasing the cost of future borrowings; (iii) limiting our ability to use operating cash flow in other areas of our business because we must dedicate a substantial portion of these funds to make payments on our debt; (iv) placing us at a competitive disadvantage compared to competitors with less debt; and (v) increasing our vulnerability to adverse economic and industry conditions.

Our ability to service our debt is dependent upon, among other things, business conditions, our financial and operating performance, our ability to raise capital, and regulatory and other factors, many of which are beyond our control. If our working capital is not sufficient to service our debt, and any future indebtedness that we incur, our business, financial condition, and results of operations will be materially adversely affected.

A3. Our continued inability to meet financial covenants under certain of our secured loan agreements could adversely impact our ability to obtain new debt, refinance, or restructure existing debt.

As described elsewhere in this report, certain of our secured loan agreements with third parties are in default related to financial covenants. Financial covenants applicable to our secured loan agreements with Veritex and GNCU require us to maintain covenants related to debt to tangible net worth, current assets to current liabilities, debt service coverage, and current ratio. Defaults permit lenders to declare the amounts owed immediately due and payable, exercise their rights with respect to collateral securing obligors' obligations under these loan agreements, and/or exercise any other rights and remedies available. Our significant current debt impacts our ability to meet debt covenants.

Our ability to meet financial covenants depends on numerous factors, including our ability to generate sufficient cash flow from operations to service debt obligations or refinance or restructure debt. This depends on, among other things, business conditions, our financial performance, and the general condition of the financial markets. Given uncertainties related to the Russian-Ukrainian military conflict, COVID-19, recession, and inflation and the extent to which these factors may impact working capital, commodity prices, refined product demand, and our supply chain, we can provide no assurance that we can successfully generate sufficient cash from operations to repay our outstanding debt or otherwise restructure or refinance the debt. We could be forced to undertake alternate financings, including a sale of additional common stock, negotiate for an extension of the maturity, or sell assets and delay capital expenditures in order to generate proceeds that could be used to repay such indebtedness. We can provide no assurance that we will be able to consummate any such transaction on terms that are commercially reasonable, on terms acceptable to us or at all. If new debt or other liabilities are added to our current consolidated debt levels, the related risks that it now faces could intensify. If new debt or other liabilities are added to LE, LRM, or NPS' current debt levels, their inability to meet financial covenants could intensify.

A4. Restrictive covenants in our debt instruments may limit our ability to undertake certain types of transactions, which could adversely affect our business, financial condition, results of operations, and our ability to service our indebtedness.

Various covenants in our debt instruments restrict our financial flexibility in a number of ways. Our current indebtedness subjects us to significant financial and other restrictive covenants, including restrictions on our ability to incur additional indebtedness, place liens upon assets, pay dividends or make certain other restricted payments and investments, consummate certain asset sales or asset swaps, conduct businesses other than our current businesses, or sell, assign, transfer, lease, convey or otherwise dispose of all or substantially all of our assets. Some of our debt instruments also require us to satisfy or maintain certain financial condition tests in certain circumstances. Our ability to meet these financial condition tests can be affected by events beyond our control and we may not meet such tests. In addition, failing to comply with the provisions of our existing debt could result in a further event of default that could enable our lenders, subject to the terms and conditions of such debt, to declare the outstanding principal, together with accrued interest, to be immediately due and payable. Events beyond our control, including the impact of the COVID-19 pandemic and related governmental responses, volatility in commodity prices, and extreme weather resulting from climate change may affect our ability to comply with our covenants. If we are unable to repay the accelerated amounts, our lenders could proceed against the collateral granted to them to secure such debt. If the payment of our debt is accelerated, defaults under our other debt instruments, if any, may be triggered, and our assets may be insufficient to repay such debt in full. In addition, loans provided or guaranteed by the U.S. government, including pursuant to the CARES Act, subject us to additional restrictions on our operations, including limitations on personnel headcount and compensation reductions and other cost reduction activities that could adversely affect us.

A5. Our business, financial condition, and operating results may be adversely affected by increased costs of capital or a reduction in the availability of credit.

Adverse changes to the availability, terms, cost of capital, interest rates, or our credit ratings (which would have a corresponding impact on the credit ratings of our subsidiaries that are party to any cross-guarantee agreements) could cause our cost of doing business to increase by limiting our access to capital, including our ability to refinance maturing or accelerated existing indebtedness on similar terms. In addition, increased crude acquisition costs could adversely impact our working capital. As a result, we cannot provide any assurance that any financing will be available to us in the future on acceptable terms or at all. Any such financing could be dilutive to our existing stockholders. If we cannot raise required funds on acceptable terms, we may further reduce our expenses and we may not be able to, among other things, (i) maintain our general and administrative expenses at current levels; (ii) successfully implement our business strategy; (iii) fund certain obligations as they become due; (iv) respond to competitive pressures or unanticipated capital requirements; (v) repay our indebtedness, or (vi) purchase crude oil to operate the Nixon facility. Based on the historical negative cash flows and the continued limited cash inflows in the period subsequent to year end there is substantial doubt about our ability to continue as a going concern.

A6. Impacts from the resurgence of COVID-19 or the outbreak of another highly infectious or contagious disease could adversely affect our business, financial condition, and operating results.

The economic, business, and oil and gas industry impacts from the COVID-19 pandemic and the disruption to capital markets have been far reaching. While the oil and gas industry has witnessed a substantial recovery of commodity prices and demand for products, there continues to be uncertainty and unpredictability about the impact of the COVID-19 pandemic on our financial and operating results in future periods. The extent to which the COVID-19 pandemic adversely impacts our future financial and operating results, and for what duration and magnitude, depends on several factors that are continuing to evolve, are difficult to predict and, in many instances, are beyond our control. Such factors include the duration and scope of the pandemic, including any further resurgences of the COVID-19 virus and its variants, and the impact on our workforce and operations; the negative impact of the pandemic on the economy and economic activity, including travel restrictions and prolonged low demand for our products; the ability of our affiliates and suppliers to successfully navigate the impacts of the pandemic; the actions taken by governments, businesses and individuals in response to the pandemic; the actions of OPEC and other countries that otherwise impact supply and demand and, correspondingly, commodity prices; the extent and duration of recovery of economies and demand for our products after the pandemic subsides; and our ability to keep our cost model in line with changing demand for our products. In-country conditions, including potential future waves of the COVID-19 virus and its variants in countries that appear to have reduced their infection rates, could impact logistics and material movement, and remain a risk to business continuity. In light of the significant uncertainty around the duration and extent of the impact of the COVID-19 pandemic, management is currently unable to develop with any level of confidence estimates and assumptions that may have a material impact on the company's consolidated financial statements and financial or operational performance in any given period. In addition, the unprecedented nature of such market conditions could cause current management estimates and assumptions to be challenged in hindsight. In addition, further resurgences of the pandemic or the outbreak of another highly infectious or contagious disease could precipitate or aggravate the other risk factors identified in this report, which in turn could materially and adversely affect our business, financial condition, liquidity, results of operations and profitability, including in ways not currently known or considered by us to present significant risks.

A7. Affiliates hold a significant ownership interest in us and exert significant influence over us, and their interests may conflict with the interests of our other stockholders; and affiliate transactions may cause conflicts of interest that may adversely affect us.

We have an indirect controlling stockholder. As a related party of an Affiliate, Jonathan Carroll indirectly owned approximately 83% of the voting power of our Common Stock as of the filing date of this report, and by virtue of such stock ownership, Mr. Carroll can control or exert substantial influence over us, including:

- Election and appointment of directors;
- Business strategy and policies;
- Mergers and other business combinations;
- Acquisition or disposition of assets;
- Future issuances of Common Stock or other securities; and
- Incurrence of debt or obtaining other sources of financing.

The existence of a controlling stockholder may have the effect of making it difficult for, or may discourage or delay, a third party from seeking to acquire a majority of our outstanding Common Stock, which may adversely affect the market price of our Common Stock.

Affiliate interest may not always be consistent with our interests or with the interests of our other stockholders. Affiliates may also pursue acquisitions or business opportunities in industries in which we compete, and there is no requirement that any additional business opportunities be presented to us. We also have and may in the future enter transactions to purchase goods or services with Affiliates. To the extent that conflicts of interest may arise between us and Affiliates, those conflicts may be resolved in a manner adverse to us or its other stockholders.

These relationships could create, or appear to create, potential conflicts of interest when our Board is faced with decisions that could have different implications for us and Affiliates. The appearance of conflicts, even if such conflicts do not materialize, might adversely affect the public's perception of us, as well as our relationship with other companies and our ability to enter new relationships in the future, which may have a material adverse effect on our ability to do business.

A8. The dangers inherent in oil and gas operations could expose us to potentially significant losses, costs, or liabilities, and reduce our liquidity.

Oil and gas operations are inherently subject to significant hazards and risks. We process, store, and handle crude oil and condensate, which, under certain circumstances, can be extremely dangerous. Hazards and risks related to the Nixon facility include, but are not limited to, catastrophic events caused by fires, explosions, pressure vessel ruptures, spills, third-party interference, electricity, and mechanical breakdown, any of which could result in interruption or termination of operations, pollution, personal injury and death, or damage to our assets and the property of others.

Offshore operations are also subject to a variety of operating risks peculiar to the marine environment. Although our pipeline assets and leasehold interests in oil and gas wells are inactive, natural disasters and other events, such as hurricanes, can result in blowouts, cratering, explosions, and loss of well control. These hazards can cause injury to persons, loss of life, and damage to property or the environment.

Any of these risks could result in substantial losses to us from a significant decrease in operations, significant additional costs to replace, repair, and insure assets, and from potential civil lawsuits, fines, penalties, and regulatory enforcement proceedings. We may also become subject to more extensive governmental regulation. These regulations may, in certain circumstances, impose strict liability for pollution damage or result in the interruption or termination of operations. These risks could also harm our reputation and business, result in claims against us, and have a material adverse effect on our results of operations and financial condition.

A9. The geographic concentration of our assets creates a significant exposure to the risks of the regional economy and other regional adverse conditions.

Our primary operating assets are in Nixon, Texas in the Eagle Ford Shale, and we market our refined products in a single, relatively limited geographic area. In addition, we have facilities and related onshore pipeline assets in Freeport, Texas, and offshore pipelines and oil and gas properties in the Gulf of Mexico. As a result, our operations are more susceptible to regional economic conditions than our more geographically diversified competitors. Any changes in market conditions, unforeseen circumstances, or other events affecting the area in which our assets are located could have a material adverse effect on our business, financial condition, and results of operations. These factors include, among other things, changes in the economy, weather, demographics, and population.

A10. Competition from companies having greater financial and other resources could materially and adversely affect our business and results of operations.

The refining industry is highly competitive. Our refining operations compete with domestic refiners and marketers in PADD 3 (Gulf Coast), domestic refiners in other PADD regions, and foreign refiners that import products into the U.S. Certain of our competitors have larger, more complex refineries and may be able to realize higher margins per barrel of product produced. Several of our principal competitors are integrated national or international oil companies that are larger and have greater resources than we do and have access to proprietary sources of controlled crude oil production. Unlike these competitors, we obtain all our feedstocks from a single supplier. Because of their integrated operations and larger capitalization, larger, more complex refineries may be more flexible in responding to volatile industry or market conditions, such as crude oil and other feedstocks supply shortages or commodity price fluctuations. If we are unable to compete effectively, we may lose existing customers or fail to acquire new customers.

A11. Our insurance policies do not cover all losses, costs, or liabilities that we may experience, and insurance companies that currently insure companies in the energy industry may cease to do so or substantially increase premiums.

Our insurance program may not cover all operational risks and costs and may not provide sufficient coverage in the event of a claim. We do not maintain insurance coverage against all potential losses and could suffer losses for uninsurable or uninsured risks or in amounts in excess of existing insurance coverage. The occurrence of an event that is not fully covered by insurance, failure by one or more of our insurers to honor its coverage commitments for an insured event, or losses in excess of our insurance coverage could have a material adverse effect on our business, financial condition, and results of operations.

There is finite capacity in the commercial insurance industry engaged in underwriting energy industry risk, and factors impacting cost and availability include: (i) losses in our industries, (ii) natural disasters, (iii) specific losses incurred by us, and (iv) inadequate investment returns earned by the insurance industry. If the supply of commercial insurance is curtailed, we may not be able to continue our present limits of insurance coverage, obtain sufficient insurance capacity to adequately insure our risks, or we may be unable to obtain and maintain adequate insurance at a reasonable cost. There is no assurance that our insurers will renew their insurance coverage on acceptable terms, if at all, or that we will be able to arrange for adequate alternative coverage in the event of non-renewal. The unavailability of full insurance coverage to cover events in which we suffer significant losses or cancellation of insurance policies could have a material adverse effect on our business, financial condition, and results of operations.

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A12. Our ability to use NOL carryforwards to offset future taxable income for U.S. federal income tax purposes is subject to limitation.

Under IRC Section 382, a corporation that undergoes an “ownership change” is subject to limitations on its ability to utilize its pre-change NOL carryforwards to offset future taxable income. Within the meaning of IRC Section 382, an “ownership change” occurs when the aggregate stock ownership of certain stockholders (generally 5% shareholders, applying certain look-through rules) increases by more than 50 percentage points over such stockholders' lowest percentage ownership during the testing period (generally three years).

Blue Dolphin experienced ownership changes in 2005 because of a series of private placements, and in 2012 because of a reverse acquisition. The 2012 ownership change limits our ability to utilize NOLs following the 2005 ownership change that were not previously subject to limitation. Limitations imposed on our ability to use NOLs to offset future taxable income could cause U.S. federal income taxes to be paid earlier than otherwise would be paid if such limitations were not in effect, and could cause such NOLs to expire unused, in each case reducing or eliminating the benefit of such NOLs. Similar rules and limitations may apply for state income tax purposes. NOLs generated after the 2012 ownership change are not subject to limitation. If the IRS were to challenge our NOLs in an audit, we cannot assure that we would prevail against such challenge. If the IRS were successful in challenging our NOLs, all or some portion of our NOLs would not be available to offset any future consolidated income, which would negatively impact our results of operations and cash flows. Certain provisions of the Tax Cuts and Jobs Act, enacted in 2017, may also limit our ability to utilize our net operating tax loss carryforwards.

At December 31, 2022 and 2021, management determined that losses incurred in three out of five prior year periods provided significant objective evidence that limited the ability to consider other subjective evidence, such as projections for future growth. Based on this evaluation, we recorded a full valuation allowance against the deferred tax assets as of December 31, 2022 and 2021.

A13. We may not be able to keep pace with technological developments in our industry.

The oil and natural gas industry is characterized by rapid and significant technological advancements and introductions of new products and services using new technologies. As others use or develop new technologies, we may be placed at a competitive disadvantage or may be forced by competitive pressures to implement those new technologies at substantial costs. We may not be able to respond to these competitive pressures or implement new technologies on a timely basis or at an acceptable cost. If one or more of the technologies we use now or in the future were to become obsolete, our business, financial condition or results of operations could be materially and adversely affected.

B. Downstream and Midstream Operations

B1. Refining margins, which are affected by commodity prices and refined product demand, are volatile, and a reduction in refining margins will adversely affect the amount of cash we will have available for working capital.

Historically, refining margins have been volatile, and they are likely to continue to be volatile in the future. Our financial results are primarily affected by the relationship between our crude oil and condensate acquisition costs, the commodity prices at which we ultimately sell our refined products, and the volume of refined products that we sell, all of which depend upon numerous factors beyond our control. The commodity prices at which we sell our refined products are strongly influenced by the commodity price of crude oil. If crude oil commodity prices increase, our ‘refinery operations’ business segment margins will fall unless we can pass along these commodity price increases to our wholesale customers. Increases in the selling prices for refined products typically trail the rising crude oil cost and may be difficult to implement when crude oil costs increase dramatically over a short period. Sharp decreases in refined product market demand, such as the record low demand that has occurred because of widespread COVID-19 related travel restrictions, can adversely affect our refining margins.

B2. The commodity price volatility of crude oil, other feedstocks, refined products, and fuel and utility services may have a material adverse effect on our earnings, cash flows, and liquidity.

Crude oil refining is primarily a margin-based business. To improve margins, we must maximize yields of higher value finished petroleum products and minimize costs of feedstocks and operating expenses. When the spread between these commodity prices decreases, our margins are negatively affected. Although an increase or decrease in the commodity price for crude oil and other feedstocks generally results in a similar increase or decrease in commodity prices for finished petroleum products, typically there is a time lag between the two. The effect of crude oil commodity price changes on our finished petroleum product commodity prices therefore depends, in part, on how quickly and how fully the market adjusts to reflect these changes. Unfavorable margins may have a material adverse effect on our earnings, cash flows, and liquidity.

The markets and commodity prices for crude oil and condensate and our finished products have historically been volatile, are likely to continue to be volatile, and depend on factors beyond our control. These factors include:

- the level of domestic and offshore production;
- the availability of crude oil and U.S. and global demand for this commodity;
- a general downturn in economic conditions;
- the impact of weather, including abnormally mild or extreme winter or summer weather that cause lower or higher energy usage for heating or cooling purposes, respectively, or extreme weather that may disrupt our operations or related upstream or downstream operations;
- actions taken by foreign oil and gas producing and importing nations, including the ability or willingness of OPEC and OPEC+ to set and maintain pricing and production levels for oil, which, for example, had a pronounced effect on global commodity prices for crude oil and the volatility thereof in 2020 during the onset and spread of the COVID-19 pandemic;
- the availability of local, intrastate, and interstate transportation systems;
- conflicts, such as Russia's invasion of Ukraine;
- the availability and marketing of competitive fuels; and
- the extent of governmental regulation and taxation.

B3. Our future success depends on our ability to acquire sufficient levels of crude oil to operate the Nixon refinery on favorable terms when needed.

Operation of the Nixon refinery depends on our ability to purchase adequate amounts of crude oil and condensate. Although we have no crude oil reserves and are not engaged in the exploration or production of crude oil, we believe that we can obtain adequate crude oil and other feedstocks at competitive commodity prices for the foreseeable future. We have a long-term crude supply agreement in place with Tartan. The volume-based Crude Supply Agreement expires when we receive 24.8 million net bbls of crude oil. After that, the Crude Supply Agreement automatically renews for successive one-year terms. Tartan must provide notice of non-renewal at least 60 days before the expiration of any renewal term. For the twelve months ended December 31, 2022 and 2021, we received approximately 4.5 million bbls, or 18.4%, and 4.2 million bbls, or 17.0%, respectively, of the contracted volume under the Crude Supply Agreement. As of December 31, 2022, we received approximately 13.6 million bbls, or 54.8%, of the total allowable contracted volume under the Crude Supply Agreement. At December 31, 2022, accounts payable for crude oil and condensate was $0. As of December 31, 2022, 100% of our crude oil was sourced from Tartan under the Crude Supply Agreement.

Related to the Crude Supply Agreement, Tartan stores crude oil at the Nixon facility under a terminal services agreement dated as of June 1, 2019. Under the terminal services agreement, crude oil is stored at the Nixon facility at a specified rate per bbl of the storage tank's shell capacity. The terminal services agreement renews on a one-year evergreen basis. Tartan must provide notice of non-renewal at least 60 days before the expiration of any renewal term. However, the terminal services agreement will automatically terminate upon expiration or termination of the Crude Supply Agreement.

Our financial health has been materially and adversely affected by defaults in our secured loan agreements, significant current debt, margin volatility, historical net losses and working capital and equity deficits. If Tartan terminates the Crude Supply Agreement or terminal services agreement, our ability to acquire crude oil and condensate could be adversely affected. If producers experience crude supply constraints and increased transportation costs, our crude acquisition costs may rise, or we may not receive sufficient amounts to meet our needs.

Given the large dollar amount required to make crude oil purchases, liquidity constraints could cause us to delay purchases of crude oil or otherwise acquire less than the desired amounts. This, in turn, could cause us to operate the Nixon facility at a lower rate on a bpd basis to meet customer demand. During the twelve-month periods ended December 31, 2022 and 2021, the refinery experienced 4 and 13 days of downtime due to lack of crude associated with cash constraints. Failing to operate the Nixon facility at the desired run rate, or at all, could adversely affect our profitability and cash flows.

B4. Downtime at the Nixon refinery could result in lost margin opportunity, increased maintenance expense, increased inventory, and a reduction in cash available for payment of our obligations.

The Nixon refinery periodically undergoes planned and unplanned temporary shutdowns. We typically complete a planned annual turnaround to repair, restore, refurbish, or replace refinery equipment. Occasionally, unplanned shutdowns occur. Unplanned downtime can occur for a variety of reasons; however, common reasons for unplanned downtime include repair/replacement of disabled equipment, crude deficiencies associated with cash constraints, high temperatures, and power outages. We are particularly vulnerable to operation disruptions because all our refining operations occur at a single facility. Any scheduled or unscheduled downtime results in lost margin opportunity, reduced refined products inventory, and potential increased maintenance expense, all of which could reduce our ability to meet our payment obligations.

During the twelve-month period ended December 31, 2022, the refinery experienced 22 days of downtime – 13 days for maintenance, 5 days due to an unnamed winter ice storm, and 4 days due to lack of crude associated with cash constraints. During the twelve-month period ended December 31, 2021, the refinery experienced 23 days of downtime – 13 days due to lack of crude associated with cash constraints and 10 days related to utility failure during Winter Storm Uri. Any scheduled or unscheduled downtime will result in lost margin opportunity, potential increased maintenance expense, and a reduction of refined products inventory, which could reduce our ability to meet our payment obligations.

B5. Potential impairment in the carrying value of long-lived assets could negatively affect our operating results.

We have a significant amount of long-lived assets on our consolidated balance sheet. Under generally accepted accounting principles, long-lived assets are required to be reviewed for impairment annually or whenever adverse events or changes in circumstances indicate a possible impairment. If business conditions or other factors cause the undiscounted estimated pretax cash flows for long-lived assets to fall below their carrying value, we may be required to record non-cash impairment charges. Events and conditions that could result in impairment in the value of our long-lived assets include lower realized refining margins, decreased refinery production, other factors leading to a reduction in expected long-term sales or profitability, or significant changes in the manner of use for the assets or the overall business strategy.

In this challenging business environment, we continuously monitor our assets for impairment, as well as optimization opportunities. We recorded an impairment of $0.1 million and $1.1 million related to asset retirement costs for our pipeline/platform assets as of December 31, 2022 and 2021, respectively. An additional impairment may be required in future periods if instabilities in the market continue long-term, losses continue to be material, or as new opportunities arise, such as reconfiguration of the Nixon refinery into a renewable fuels facility.

Significant management judgment is required in the forecasting of future operating results that are used in the preparation of projected cash flows. As a result, there can be no assurance that the estimates and assumptions made for purposes of our impairment analysis will prove to be an accurate prediction of the future. Should our assumptions significantly change in future periods, it is possible we may later determine the carrying values of our refinery and facilities assets exceed the undiscounted estimated pretax cash flows, which would result in a future impairment charge.

B6. We may have capital needs for which internally generated cash flows and external financing are inadequate. Affiliates may, but are not required to, fund our working capital requirements in such instances.

We have historically relied on Affiliates for funding when revenue from operations and availability under bank facilities were insufficient to meet our liquidity and working capital needs. We reflect such borrowings in our consolidated balance sheets in accounts payable, related party, or long-term debt, related party. At both December 31, 2022 and 2021, accounts payable, related party totaled $0.2 million. At December 31, 2022 and 2021, long-term debt, related party, current portion (in default) and accrued interest payable, related party totaled $9.3 million and $23.5 million, respectively.

If we are unable to generate sufficient cash flows or otherwise secure sufficient liquidity from Affiliates or external financing, we may not be able to meet our short- and long-term working capital needs. Our short-term working capital needs are primarily related to: (i) purchasing crude oil and condensate to operate the Nixon refinery, (ii) reimbursing LEH for direct operating expenses and paying the LEH operating fee under the Amended and Restated Operating Agreement, (iii) servicing debt, (iv) maintaining and expanding the Nixon facility through capital expenditures, and (v) meeting regulatory compliance mandates. Our long-term working capital needs are primarily related to repayment of long-term debt obligations.

There can be no assurance that Affiliates will continue to fund our working capital requirements. If we are unable to generate sufficient working capital or raise additional capital on acceptable terms, or at all, we may not, in the short term, be able to purchase crude oil and condensate or meet debt payment obligations. In the long term, we may not be able to withstand business disruptions, such as from COVID-19, or execute our business strategy. We may have to consider other options, such as selling assets, raising additional debt or equity capital, seek bankruptcy protection, or cease operating.

B7. Our business may suffer if any of the executive officers or other key personnel discontinue employment with us. Furthermore, a shortage of skilled labor or disruptions in our labor force may make it difficult for us to maintain productivity.

Our future success depends on the services of the executive officers and other key personnel and on our continuing ability to recruit, train and retain highly qualified personnel in all areas of our operations. In particular, Jonathan Carroll currently serves as our principal executive, principal financial and principal accounting officer. We are highly dependent on his continued services to execute our business plan and strategy. Furthermore, our operations require skilled and experienced personnel with proficiency in multiple tasks. Competition for skilled personnel with industry-specific experience is intense, and the loss of these executives or personnel could harm our business. If any of these executives or other key personnel resign or become unable to continue in their present roles and are not adequately replaced, our business could be materially adversely affected.

B8. Loss of business from, or the bankruptcy or insolvency of, one or more of our significant customers, one of which is an Affiliate, could have a material adverse effect on our financial condition, results of operations, liquidity, and cash flows.

We have bulk term contracts in place with most of our customers, including month-to-month, six months, and up to one-year terms. Certain of our contracts require our customers to prepay and us to sell fixed quantities and/or minimum quantities of finished and intermediate petroleum products. Many of these arrangements are subject to periodic renegotiation on a forward-looking basis, which could result in higher or lower relative commodity prices on future sales of our refined products.

Our customers have a variety of suppliers to choose from. As a result, they can make substantial demands on us, including demands for more favorable product pricing or contractual terms. Our ability to maintain strong relationships with our principal customers is essential to our future performance. Our operating results could be harmed if a key customer is lost, reduces their order quantity, requires us to reduce our commodity prices, is acquired by a competitor, or suffers financial hardship. Additionally, our profitability could be adversely affected if there is consolidation among our customer base and our customers command increased leverage in negotiating commodity prices and other terms of sale. We could decide not to sell our refined products to a certain customer if, because of increased leverage, the customer pressures us to reduce our pricing such that our gross profits are diminished, which could result in a decrease in our revenue. Consolidation may also lead to reduced demand for our products, replacement of our products by the combined entity with those of our competitors, and cancellations of orders, each of which could harm our operating results. Loss of business from, or the bankruptcy or insolvency of, one or more of our major customers could similarly affect our financial condition, results of operations, liquidity, and cash flows.

One of our significant customers is LEH, an Affiliate. Due to a HUBZone certification, the Affiliate purchases our jet fuel under a Jet Fuel Sales Agreement and bids on jet fuel contracts under preferential pricing terms. The Affiliate accounted for 35.6% and 29.9% total revenue from operations for the twelve months ended December 31, 2022, and 2021, respectively. The Affiliate represented $0 in accounts receivable at both December 31, 2022, and 2021.

Twelve Months Ended	Number Significant	% Total	Portion of Accounts

	Customers	Revenue from Operations	Receivable at December 31,
December 31, 2022	**2**	**60.4%**	**$ 0**
December 31, 2021	3	71.9%	$ 0

B9. We are dependent on third parties for the transportation of crude oil and condensate into and refined products out of our Nixon facility; if these third parties become unavailable to us, our ability to process crude oil and condensate and sell refined products to wholesale markets could be materially and adversely affected.

We rely on trucks for the receipt of crude oil and condensate into and the sale of refined products out of our Nixon facility. Since we do not own or operate any of these trucks, their continuing operation is not within our control. If any of the third-party trucking companies that we use, or the trucking industry in general, become unavailable to transport crude oil, condensate, and/or our refined products because of acts of God, accidents, government regulation, terrorism or other events, our revenue and net income would be materially and adversely affected.

B10. Our suppliers source a substantial amount, if not all, of our crude oil and condensate from the Eagle Ford Shale and may experience interruptions of supply from that region.

Our suppliers source a substantial amount, if not all, of our crude oil and condensate from the Eagle Ford Shale. Consequently, we may be disproportionately exposed to the impact of delays or interruptions of supply from that region caused by transportation capacity constraints, curtailment of production, unavailability of equipment, facilities, personnel or services, significant governmental regulation, severe weather, plant closures for scheduled maintenance, or the interruption of oil or natural gas being transported from wells in that area.

B11. Our refining operations and customers are primarily located within the Eagle Ford Shale and changes in the supply/demand balance in this region could result in lower refining margins.

Our primary operating assets are in Nixon, Texas in the Eagle Ford Shale, and we market our refined products in a single, limited geographic area. Therefore, we are more susceptible to regional economic conditions than our more geographically diversified competitors. Should the supply/demand balance shift in our region due to changes in the local economy, an increase in refining capacity or other reasons, resulting in supply in the PADD 3 (Gulf Coast) region to exceed demand, we would have to deliver refined products to customers outside of our current operating region and thus incur considerably higher transportation costs, resulting in lower refining margins.

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B12. Severe weather or other events affecting our facilities, or those of our vendors, suppliers, or customers could have a material adverse effect on our liquidity, business, financial condition, and results of operations.

Our operations are subject to all of the risks and operational hazards inherent in receiving, handling, storing, and transferring crude oil and petroleum products, including: damages to facilities, related equipment and surrounding properties caused by severe weather (such as extreme cold or hot temperatures, hurricanes, floods, and other natural disasters) or other events (such as equipment malfunctions, mechanical or structural failures, explosions, fires, spills, or acts of terrorism) at our facilities or at third-party facilities on which our operations are dependent could result in severe damage or destruction to our assets or the temporary or permanent shut-down of our operations. If we are unable to operate, our liquidity, business, financial condition, and results of operations could be materially affected.

B13. Our new business strategy may not materialize or underperform expectations.

Our business strategy to leverage existing infrastructure and capitalize on green energy growth depends on our ability to find commercial partners and government loans as vehicles to enter the renewable energy space. The plans are subject to business, economic and competitive uncertainties, many of which are beyond our control. Additionally, we may be forced to develop or implement new technologies at substantial costs to achieve our strategy. These uncertainties and costs could cause us to not be able to fully implement or realize the anticipated results and benefits of our business strategy.

C. Legal, Government, and Regulatory

C1. Environmental laws and regulations could require us to make substantial capital expenditures to remain in compliance or to remediate current or future contamination that could give rise to material liabilities.

Our operations are subject to a variety of federal, state, and local environmental laws and regulations relating to the protection of the environment and natural resources, including those governing the emission or discharge of pollutants into the environment, product specifications and the generation, treatment, storage, transportation, disposal, and remediation of solid and hazardous wastes. Violations of these laws and regulations or permit conditions can result in substantial penalties, injunctive orders compelling installation of additional controls, civil and criminal sanctions, permit revocations and/or facility shutdowns.

In addition, new environmental laws and regulations, new interpretations of existing laws and regulations, increased governmental enforcement of laws and regulations, or other developments could require us to make additional unforeseen expenditures. Many of these laws and regulations are becoming increasingly stringent, and the cost of compliance with these requirements can be expected to increase over time. The requirements to be met, as well as the technology and length of time available to meet those requirements, continue to develop and change. Expenditures or costs for environmental compliance could have a material adverse effect on our results of operations, financial condition, and profitability. For example, President Biden has issued an executive order seeking to adopt new regulations and policies to address climate change and to consider suspending, revising, or rescinding prior agency actions that are identified as conflicting with the Biden Administration’s climate policies. The current administration may take further actions that could restrict or limit operations as currently conducted at the Nixon Facility.

The Nixon facility operates under several federal and state permits, licenses, and approvals with terms and conditions that contain a significant number of prescriptive limits and performance standards. These permits, licenses, approvals, limits, and standards require a significant amount of monitoring, record keeping and reporting to demonstrate compliance with the underlying permit, license, approval, limit or standard. Non-compliance or incomplete documentation of our compliance status may result in the imposition of fines, penalties, and injunctive relief. Additionally, there may be times when we are unable to meet the standards and terms and conditions of our permits, licenses, and approvals due to operational upsets or malfunctions, which may lead to the imposition of fines and penalties or operating restrictions that may have a material adverse effect on our ability to operate our facilities, and accordingly our financial performance.

C2. We are subject to strict laws and regulations regarding personnel and process safety, and failing to comply with these laws and regulations could have a material adverse effect on our results of operations, financial condition, and profitability.

We are subject to the requirements of OSHA, and comparable state statutes that regulate the protection, health, and safety of workers, and the proper design, operation, and maintenance of our equipment. In addition, OSHA and certain other environmental regulations require that we maintain information about hazardous materials used or produced in our operations and that we provide this information to personnel and state and local governmental authorities. Failing to comply with these requirements, including general industry standards, record keeping requirements and monitoring and control of occupational exposure to regulated substances, may result in significant fines or compliance costs, which could have a material adverse effect on our results of operations, financial condition, and cash flows.

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C3. Uncertainty exists regarding the impact of current and future sanctions imposed by governments and other authorities, including the United States, the European Union, and the United Kingdom in response to Russia's invasion of Ukraine.

In February 2022, Russia initiated significant military action against Ukraine. In response, the U.S. and certain other countries imposed significant sanctions and export controls against Russia, and the U.S. and certain other countries could impose further sanctions, trade restrictions, and other retaliatory actions should the conflict continue or worsen. It is not possible to predict the broader consequences of the conflict, including related geopolitical tensions, and the measures and retaliatory actions taken by the U.S. and other countries in respect thereof as well as any counter measures or retaliatory actions by Russia in response, including, for example, potential cyberattacks or the disruption of energy exports, is likely to cause regional instability, geopolitical shifts, and could materially adversely affect global trade, currency exchange rates, regional economies and the global economy. On year later, the situation remains uncertain, and while it is difficult to predict the impact of any of the foregoing, the conflict and actions taken in response to the conflict could increase our costs for crude oil, disrupt our supply chain, reduce our sales and earnings, impair our ability to raise additional capital when needed on acceptable terms, if at all, or otherwise adversely affect our business, financial condition, and results of operations.

C4. General economic, political, or regulatory developments, including recession, inflation, interest rates, or changes in governmental policies relating to refined petroleum products, crude oil, or taxation could adversely affect our business, operating results, and financial condition.

Economic slowdowns may have serious negative consequences for our business and operating results because our performance is subject to domestic economic conditions and their impact on levels of consumer spending (e.g., consumer airline travel relating to jet fuel). Some of the factors affecting consumer spending include general economic conditions, unemployment, consumer debt, recession, inflation, reductions in net worth based on declines in equity markets and residential real estate values, adverse developments in mortgage markets, taxation, energy prices, interest rates, consumer confidence and other macroeconomic factors. Political instability and global health crises, such as COVID-19, can also impact the global economy and decrease worldwide demand for oil and refined products. During a period of economic weakness or uncertainty, current or potential customers may travel less, reduce, or defer purchases, go out of business, or have insufficient funds to buy or pay for our products and services. Moreover, a financial market crisis may have a material adverse impact on financial institutions and limit access to capital and credit. This could, among other things, make it more difficult for us to obtain (or increase our cost of obtaining) capital and financing for our operations. Our access to additional capital may not be available on terms acceptable to us or at all.

Because our refinery is located in the Gulf Coast Region, we primarily market our refined products in a relatively limited geographic area. As a result, we are more susceptible to regional economic conditions compared to our more geographically diversified competitors, and any unforeseen events or circumstances that affect the Gulf Coast Region could also materially and adversely affect our revenues and cash flows. The primary factors include, among other things, changes in the economy, weather conditions, demographics and population, increased supply of refined products from competitors and reductions in the supply of crude oil or other feedstocks. In the event of a shift in the supply/demand balance in the Gulf Coast Region due to changes in the local economy, an increase in aggregate refining capacity or other reasons, resulting in supply exceeding the demand in the region, our refinery may have to deliver refined products to more customers outside of the Gulf Coast Region and thus incur considerably higher transportation costs, resulting in lower refining margins, if any.

C5. Assessment of penalties by regulatory agencies, such as BOEM, BSEE, OSHA, and TCEQ for failing to meet regulatory requirements could adversely affect our business, operating results, and financial condition.

Failing to Satisfy Financial Assurance (Supplemental Pipeline Bond) Requirements (BOEM). To cover the various obligations of lessees and rights-of-way holders operating in federal waters of the Gulf of Mexico, BOEM evaluates an operator's financial ability to carry out present and future obligations to determine whether the operator must provide additional security beyond the statutory bonding requirements. Such obligations include the cost of plugging and abandoning wells and decommissioning pipelines and platforms at the end of production or service activities. Once plugging and abandonment work has been completed, the collateral backing the financial assurance is released by BOEM.

BDPL historically maintained $0.9 million in financial assurance to BOEM for the decommissioning of its trunk pipeline offshore in federal waters. Following an agency restructuring of the financial assurance program, in March 2018 BOEM ordered BDPL to provide additional financial assurance totaling approximately $4.8 million for five (5) existing pipeline rights-of-way. In June 2018, BOEM issued BDPL INCs for each right-of-way that failed to comply. BDPL appealed the INCs to the IBLA. Although the IBLA granted multiple extension requests, the Office of the Solicitor of the U.S. Department of the Interior indicated that BOEM would not consent to further extensions. The solicitor's office signaled that BDPL's adherence to milestones identified in an August 2019 meeting between management and BSEE may help in future discussions with BOEM related to the INCs. Decommissioning of these assets will significantly reduce or eliminate the amount of financial assurance required by BOEM, which may serve to partially or fully resolve the INCs.

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BDPL's pending appeal of the BOEM INCs does not relieve BDPL of its obligations to provide additional financial assurance or of BOEM's authority to impose financial penalties. There can be no assurance that we will be able to meet additional financial assurance (supplemental pipeline bond) requirements. If BDPL is required by BOEM to provide significant additional financial assurance (supplemental pipeline bonds) or is assessed significant penalties under the INCs, we will experience a significant and material adverse effect on our operations, liquidity, and financial condition.

We are currently unable to predict the outcome of the BOEM INCs. Accordingly, we did not record a liability on our consolidated balance sheets as of December 31, 2022 and 2021. At both December 31, 2022 and 2021, BDPL maintained approximately $0.9 million in pipeline rights-of-way surety bonds issued to BOEM through RLI Corp. Of the pipeline rights-of-way bonds, $0.7 million was credit-backed and $0.2 million was cash-backed.

Failing to Decommission Pipeline and Platform Assets (BSEE). BDPL has pipelines and platform assets that are subject to BSEE's idle iron regulations. Idle iron regulations mandate lessees and rights-of-way holders to permanently abandon and/or remove platforms and other structures when they are no longer useful for operations. Until such structures are abandoned or removed, lessees and rights-of-way holders are required to inspect and maintain the assets in accordance with regulatory requirements.

In December 2018, BSEE issued an INC to BDPL for failing to flush and fill Pipeline Segment No. 13101. Management met with BSEE in August 2019 to address BDPL's plans with respect to decommissioning its offshore pipelines and platform assets. BSEE proposed that BDPL re-submit pipeline and platform decommissioning permit applications, including a safe boarding plan, by February 2020. BDPL submitted permit applications to BSEE in February 2020 and the USACOE in March 2020. In April 2020, BSEE issued another INC to BDPL for failing to perform the required structural surveys for the GA-288C Platform. BDPL completed the required platform surveys in June 2020.

In August 2022, BSEE issued an INC to BDPL for failing to complete decommissioning its main offshore pipeline and anchor platform. In addition, pursuant to a September 2022 letter, BSEE ordered BDPL to complete pipeline decommissioning and removal of the anchor platform by June 1, 2023. BDPL is examining the feasibility of completing decommissioning operations by BSEE's deadline. In March 2023, BSEE issued an INC to BDPL for failing to perform the required structural surveys for the GA-288C platform for 2021 and 2022, and for failing to provide BSEE with such survey results. BDPL is obtaining vendor quotes for the performance of the required surveys and intends to submit a corrective action plan to BSEE. If BDPL fails to complete decommissioning of the offshore pipeline and platform assets and/or remedy the INCs within the timeframe mandated by BSEE, BDPL could be subject to regulatory oversight and enforcement, including but not limited to failing to correct an INC, civil penalties, and revocation of BDPL's operator designation, which could have a material adverse effect on our earnings, cash flows, and liquidity.

We cannot currently estimate when decommissioning may occur or predict the outcome of the BSEE INCs. Accordingly, we did not record a liability related to potential penalties on our consolidated balance sheets as of December 31, 2022 and 2021. At December 31, 2022 and 2021, BDPL maintained $3.7 million and $3.5 million, respectively, in AROs related to abandonment of these assets, which amount does not include potential penalties.

Process Safety Management Violations (OSHA). In September 2022, we entered into an Informal Settlement Agreement with OSHA related to process safety management violations at the Nixon refinery. Under the agreement, we paid penalties totaling $0.05 million in November 2022. We remediated a significant portion of identified violations prior to December 31, 2022. Most of the remaining violations were remediated prior to March 31, 2023. Work on the final violation is in progress, and we expect to complete the work in April 2023. Failing to abide by the terms of the agreed could result in additional fines.

Alleged Hazardous Waste Violations (TCEQ). In October 2021, LRM received a proposed agreed order from the TCEQ for alleged solid and hazardous waste violations discovered during an investigation from January to March 2020. The proposed agreed order assessed an administrative penalty of approximately $0.4 million and identified actions needed to correct the alleged violations. We are currently seeking to negotiate a reduced penalty amount. In May 2022, management met with the TCEQ to review the alleged solid hazardous waste violations. As follow-up to the meeting, LRM provided additional documentation to the TCEQ in a June 2022 letter. On March 29, 2023, TCEQ requested a meeting in April 2023 to review LRM's submissions to date. We recorded a liability for the maximum proposed amount of $0.4 million on our consolidated balance sheets within accrued expenses and other current liabilities as of December 31, 2022 and 2021. We cannot currently estimate when the TCEQ hazardous waste matter will be resolved or predict the outcome of the violations.

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C6. Our estimates of future AROs related to our pipeline and facilities assets may increase.

We recorded an ARO liability related to future asset retirement costs associated with dismantling, relocating, or disposing of our offshore platform, pipeline systems, and related onshore facilities, as well as for plugging and abandoning wells and restoring land and seabeds. We based asset retirement cost estimates on regulatory requirements and then current market rates for decommissioning and removal of assets with our given structural and water depth specifications. Estimating future costs are difficult and require management to make judgments that are subject to future revisions based upon numerous factors, including changing technology, political, and regulatory environments. In addition, market rates for dive operations are subject to fluctuations based on season, fuel costs, insurance rates, equipment availability, and industry changes. A significant change in any of these factors could increase our ARO liability, which could have a material adverse effect on our business, financial condition, and results of operations.

C7. Regulatory changes, as well as proposed measures that are reasonably likely to be enacted, related to greenhouse gas emissions, climate change, and an ongoing desire to transition to greater renewable energy solutions could require us to incur significant costs or could result in a decrease in demand for our refined products, which could adversely affect our business.

Scientific studies conclusively show that, in the absence of human intervention, the rate of increase of carbon dioxide in the atmosphere will significantly increase in the next 100 years. This increase in carbon dioxide has enhanced the Earth's natural greenhouse effect, resulting in global warming. Higher concentrations of greenhouse gases (including carbon dioxide, methane, and nitrous oxides) in the atmosphere can produce changes in climate with significant physical effects, including increased frequency and severity of storms, floods, and other extreme weather events that could affect our operations. Increased concern over the effects of climate change have begun to affect our competition and customers' energy strategies, consumer consumption patterns, and government and private sector alternative energy initiatives. More aggressive efforts by governments and non-governmental organizations to put in place laws requiring or otherwise driving reductions in greenhouse gas emissions appear likely and any such future laws and regulations could result in increased compliance costs or additional operating restrictions applicable to our customers and/or us, and any increase in the prices of refined products resulting from such increased costs, greenhouse gas cap-and-trade programs or taxes on greenhouse gases, could result in reduced demand for our refined petroleum products. Additionally, changing customer sentiment towards renewable and sustainable energy products may reduce demand for our products, and an excess of supply over demand could reduce fossil fuel prices. If we fail to stay in step with the pace and extent of the market shift, we could impact future earnings; if we move too fast, we risk investing in technologies, markets, and low-carbon products that will be unsuccessful. These factors could also have a material adverse effect on our business, financial condition, and results of operations.

Reducing greenhouse gas emissions has been a focus of the Biden Administration. In February 2021, the United States rejoined the Paris Agreement, and in April 2021 the Biden Administration announced a new target for the United States to achieve a 50-52 percent reduction from 2005 levels in economy-wide net greenhouse gas pollution in 2030. These and similar regulations could require us to incur costs to monitor, report, and reduce greenhouse gas emissions associated with our operations.

Federal and state requirements to reduce greenhouse gas emissions could result in increased costs to operate and maintain the Nixon facility as well as implement and manage new emission controls and programs. Cap-and-trade places a cap on greenhouse gases and refiners are required to acquire a sufficient number of credits to cover emissions from their refinery and in-state sales of gasoline and diesel. Similarly, low carbon fuel standards require an established percentage reduction in the carbon intensity of gasoline and diesel by a specified time period. Compliance with the low carbon fuel standard is achieved through blending lower carbon intensity biofuels into gasoline and diesel or by purchasing credits. Compliance with each of these programs is facilitated through a market-based credit system. If sufficient credits are unavailable for purchase or refiners are unable to pass through costs to their customers, they must pay a higher price for credits. It is currently uncertain how the Biden Administration or future administrations will address greenhouse gas emissions and climate change. In the event we do incur increased costs as a result of increased efforts to control greenhouse gas emissions, we may not be able to pass on any of these costs to our customers. Regulatory requirements also could adversely affect demand for the refined petroleum products that we produce. Any increased costs or reduced demand could materially and adversely affect our business and results of operations.

D. Security

D1. A terrorist attack or armed conflict could harm our business.

Terrorist activities, anti-terrorist efforts and other armed conflicts involving the United States or other countries may adversely affect the United States and global economies and could prevent us from meeting our financial and other obligations. For example, Russia's recent invasion of Ukraine and resulting sanctions and export controls by the United States and other countries could have wide-ranging impacts that have yet to be identified. Given the evolving geopolitical situation, there are many unknown factors and events that could materially impact our operations, which may be temporary or permanent in nature. These tensions also create heightened risk of a terrorist attack or armed conflict involving the United States. If any of these events occur, the resulting political instability and societal disruption could reduce overall demand for oil and natural gas, potentially putting downward pressure on demand for our production and causing a reduction in our revenues. Oil and natural gas related facilities could be direct targets of terrorist attacks, and our operations could be adversely impacted if infrastructure integral to our operations or the operations of our customers' is destroyed or damaged. Costs for insurance and other security may increase as a result of these threats, and some insurance coverage may become more difficult to obtain, if available at all.

D2. We face various risks associated with increased activism against oil and natural gas companies.

Opposition toward oil and natural gas companies has been growing globally and is particularly pronounced in the United States. Companies in the oil and natural gas industry are often the target of activist efforts from both individuals and non-governmental organizations regarding safety, human rights, environmental matters, sustainability, and business practices. Anti-development activists are working to, among other things, reduce access to federal and state government lands and delay or cancel certain operations such as drilling and development. Any restrictions or limitations on our business or operations resulting from such opposition could have a material adverse effect on our financial condition and results of operations.

D3. Our business could be negatively affected by cyber security threats.

A cyberattack or similar incident could occur and result in information theft, data corruption, loss of data privacy, operational disruption, damage to our reputation or financial loss. Our industry has become increasingly dependent on digital technologies to conduct certain exploration, development, production, processing, and financial activities. Our technologies, systems, networks, or other proprietary information, and those of our vendors, suppliers, and other business partners, may become the target of cyberattacks or information security breaches that could result in the unauthorized release, gathering, monitoring, misuse, loss, or destruction of proprietary and other information, or could otherwise lead to the disruption of our business operations. Cyberattacks are becoming more sophisticated and certain cyber incidents, such as surveillance, may remain undetected for an extended period and could lead to disruptions in critical systems or the unauthorized release of confidential or otherwise protected information. These events could lead to financial loss from remedial actions, loss of business, disruption of operations, damage to our reputation or potential liability. Also, computers control nearly all the oil and gas distribution systems in the United States and abroad, which are necessary to transportation our production to market. A cyberattack directed at oil and gas distribution systems could damage critical distribution and storage assets or the environment, delay or prevent delivery of production to markets and make it difficult or impossible to accurately account for production and settle transactions. Cyber incidents have increased, and the United States government has issued warnings indicating that energy assets may be specific targets of cybersecurity threats. Our systems and insurance coverage for protecting against cybersecurity risks may not be sufficient. Further, as cyberattacks continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any vulnerability to cyberattacks.

E. Common Stock

E1. Our stock price has experienced fluctuations and may continue to do so, resulting in a substantial loss in your investment.

The market for our Common Stock has been characterized by volatile prices. As a result, investors in our Common Stock may experience a decrease in the value of their securities, including decreases unrelated to our operating performance or prospects. The market price of our Common Stock is likely to be highly unpredictable and subject to wide fluctuations in response to various factors, many of which are beyond our control. These factors include:

- Quarterly variations in our operating results and achievement of key business metrics.
- Changes in the global economy and the local economies in which we operate.
- Our ability to obtain working capital financing.
- Changes in the federal, state, and local laws and regulations to which we are subject.
- Market reaction to any acquisitions, joint ventures or strategic investments announced by us or our competitors.
- The departure of any of our key executive officers and directors.
- Future sales of our securities.

E2. Increasing attention to environmental, social, and governance (ESG) matters may impact our business.

Increasing attention to ESG matters, including those related to climate change and sustainability, increasing societal, investor and legislative pressure on companies to address ESG matters, may result in increased costs, reduced demand for our products, reduced profits, increased investigations and litigation or threats thereof, negative impacts on our stock price and access to capital markets, and damage to our reputation. Some investors have been divesting and promoting divestment of or screening out of fossil fuel equities and urging lenders to limit funding to companies engaged in the extraction of fossil fuel reserves. Further, voluntary carbon-related and target-setting frameworks have developed, and continue to develop, that limit the ability of certain sectors, including the oil and gas sector, from participating, and may result in exclusion of our equity from being included as an investment option in portfolios. In addition, organizations that provide information to investors on corporate governance and related matters have developed ratings processes for evaluating companies on their approach to ESG matters, including climate change and climate-related risks (including entities commonly referred to as "raters and rankers"). Such ratings are used by some investors to inform their investment and voting decisions. Unfavorable ESG ratings and investment community divestment initiatives, among other actions, may lead to negative investor sentiment toward us and to the diversion of investment to other industries, which could have a negative impact on our stock price and our access to and costs of capital. Additionally, evolving expectations on various ESG matters, including biodiversity, waste, and water, may increase costs, require changes in how we operate and lead to negative shareholder sentiment.

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E3. Our stock price may decline due to sales of shares.

Affiliates sales of substantial amounts of our Common Stock, or the perception that these sales may occur, may adversely affect the price of our Common Stock and impede our ability to raise capital through the issuance of equity securities in the future. Affiliates could elect in the future to request that we file a registration statement to them to sell shares of our Common Stock. If Affiliates were to sell a large number of shares into the public markets, Affiliates could cause the price of our Common Stock to decline.

E4. We are authorized to issue up to a total of 20 million shares of our Common Stock and 2.5 million shares of preferred stock; issuance of additional shares would further dilute the equity ownership of current holders and potentially dilute the share price of our Common Stock.

We periodically issue Common Stock to non-employee directors for services rendered to the Board and to Jonathan Carroll pursuant to the Guaranty Fee Agreements. In the past, we have also issued Common Stock, Preferred Stock, convertible securities (such as convertible notes), and warrants in order to raise capital. We believe that it is necessary to maintain a sufficient number of available authorized shares of our Common Stock and Preferred Stock to provide us with the flexibility to issue Common Stock or Preferred Stock for business purposes that may arise as deemed advisable by our Board. These purposes could include, among other things, (i) future stock splits, which may increase the liquidity of our shares; (ii) the sale of stock to obtain additional capital or to acquire other companies or businesses, which could enhance our growth strategy or allow us to reduce debt if needed; and (iii) for other bona fide purposes. Our Board may authorize us to issue the available authorized shares of Common Stock or Preferred Stock without notice to, or further action by, our stockholders, unless stockholder approval is required by law or the rules of the OTCQX. The issuance of additional shares of Common Stock or new shares of Preferred Stock, convertible securities, and/or warrants may significantly dilute the equity ownership of the current holders of our Common Stock, affect the rights of our stockholders, or could reduce the market price of our Common Stock. In addition, the issuance or sale of large amounts of our Common Stock, or the potential for issuance or sale even if they do not actually occur, may have the effect of depressing the market price of our Common Stock.

E5. Shares eligible for future sale pursuant to Rule 144 may adversely affect the market.

From time to time, certain of our stockholders may be eligible to sell all or some of their shares of Common Stock by means of ordinary brokerage transactions in the open market pursuant to Rule 144 promulgated under the Securities Act, subject to certain limitations. In general, pursuant to Rule 144, stockholders who have been non-affiliates for the preceding three months may sell shares of our Common Stock freely after six months subject only to the current public information requirement. Affiliates may sell shares of our Common Stock after six months subject to the Rule 144 volume, manner of sale, current public information, and notice requirements. Any substantial sales of our Common Stock pursuant to Rule 144 may have a material adverse effect on the market price of our Common Stock.

E6. We do not expect to pay cash dividends in the foreseeable future and therefore investors should not anticipate cash dividends on their investment.

Under certain of our secured loan agreements, we are restricted from declaring or paying any dividend on our Common Stock without the prior written consent of the lender. We have historically not declared any dividends on our Common Stock and there can be no assurance that cash dividends will ever be paid on our Common Stock.

E7. We do not currently have a chief financial officer; and failing to maintain effective internal controls in accordance with Section 404(a) of the Sarbanes-Oxley Act could result in material weaknesses in our internal controls and have a material adverse effect on our business and stock price.

As a publicly traded company, we are required to comply with the SEC's rules implementing Sections 302 and 404(a) of the Sarbanes-Oxley Act, which requires management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of controls over financial reporting. Jonathan Carroll, our Chief Executive Officer, also serves as our principal financial and principal accounting officer. Although we review our internal controls over financial reporting in order to ensure compliance with Section 404 requirements, having a chief financial officer would reduce the likelihood of errors related to the recording, disclosure, and presentation of consolidated financial information in quarterly, annual, and other filings. Material weaknesses could result in an adverse reaction in the financial marketplace due to a loss of investor confidence in the reliability of our financial statements, which ultimately could negatively impact our stock price.

There are inherent limitations in the effectiveness of any control system, including the potential for human error and the possible circumvention or overriding of controls and procedures. Additionally, judgments in decision-making can be faulty and breakdowns can occur because of a simple error or mistake. An effective control system can provide only reasonable, not absolute, assurance that the control objectives of the system are adequately met. Accordingly, management does not expect that the control system can prevent or detect all errors or fraud. Further, projections of any evaluation or assessment of effectiveness of a control system to future periods are subject to the risks that, over time, controls may become inadequate because of changes in an entity's operating environment or deterioration in the degree of compliance with policies or procedures.

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ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

An Affiliate operates and manages all our properties under the Amended and Restated Operating Agreement. Our owned facilities have been constructed or acquired over a period of years and vary in age and operating efficiency. We believe that all our properties and facilities are adequate for our operations and that our facilities are adequately maintained. At our corporate headquarters, BDSC leases 7,675 square feet of office space in Houston, Texas. The location and general description of our other properties are described within refinery operations, tolling and terminaling, and inactive operations discussions in "Part I, Item 1. Business".

BDSC Office Lease Default

In March 2021, BDSC defaulted on the office lease due to non-payment of rent. In May 2021, BDSC and TR 801 Travis LLC ("Building Lessor") reached an agreement to cure BDSC's office lease default. Under a Fourth Amendment to Lease dated May 27, 2021 (the "Fourth Amendment"), Building Lessor agreed to defer BDSC's past due obligations, including rent installments and other charges totaling approximately $0.1 million (the "Past Due Obligations"), in equal monthly installments beginning in June 2021, and continuing through lease expiration. The Past Due Obligations were subject to an annual percentage rate of 4.50%. As revised under the Fourth Amendment, BDSC's base rent including the prorated portion of the Past Due Obligations was $0.02 million per month. Subsequent to the Fourth Amendment, Building Lessor notified BDSC of a new default under the office lease due to non-payment of rent. As a result of the subsequent default, Building Lessor deemed the Fourth Amendment invalid. On June 9, 2022, BDSC paid all past due amounts totaling approximately $0.2 million to Building Lessor and Building Lessor considered the office lease default cured. The 68-month operating lease expires in August 2023. BDSC had an option to extend the lease term for an additional five (5) year period. However, BDSC is considering the economic advantages of alternative locations.

See "Part I, Item 1. Business" for additional disclosures related to our properties, leases, decommissioning obligations, and assets pledged as collateral.

ITEM 3. LEGAL PROCEEDINGS

In the ordinary course of business, we are involved in legal matters incidental to the routine operation of our business, such as mechanic's liens and contract-related disputes. We may also become party to lawsuits, administrative proceedings, and governmental investigations, including environmental, regulatory, and other matters. Large, and sometimes unspecified, damages or penalties may be sought from us in some matters and certain matters may require years to resolve. Although we cannot provide assurance, we believe that an adverse resolution of the matters described below would not have a material impact on our liquidity, consolidated financial position, or consolidated results of operations.

Unresolved Matters

Pilot Dispute Related to Terminal Services Agreement. Effective May 9, 2019, NPS and Pilot entered into a Terminal Services Agreement, pursuant to which NPS agreed to store jet fuel purchased by Pilot at the Nixon facility. On August 25, 2022, Pilot provided the required 60-days' notice of its intent to terminate the Terminal Services Agreement, which became effective on October 24, 2022. As of the Terminal Services Agreement termination date, approximately 185,000 bbls of Pilot's jet fuel remained at the Nixon facility.

On October 28, 2022, Pilot commenced an action and application for a temporary restraining order ("TRO") against NPS in Harris County District Court (the "Texas Action"). After a hearing on the application on October 28, 2022, Pilot's application for the TRO was denied the same day.

On December 2, 2022, NPS filed its answer in the Texas Action. On December 6, 2022, NPS provided notice under Section 7.206(a) of the Texas Business and Commerce Code ("TBCC") of its intent to sell the remaining inventory of Pilot's jet fuel at the Nixon facility by January 7, 2023. After a series of negotiations, NPS agreed to forbear from exercising its remedies under the TBCC while the parties explored a potential compromise of the dispute. The parties entered a Forbearance and Accommodation Agreement on January 12, 2023, with the forbearance period terminating on February 28, 2023. As part of the Forbearance and Accommodation Agreement, Pilot paid NPS approximately $1.481 million on January 13, 2023.

On March 31, 2023, NPS and Pilot executed an Amendment to the Forbearance and Accommodation Agreement ("March 31 Amendment") with the forbearance term extending to June 15, 2023. The March 31 Amendment requires an additional payment by Pilot to NPS of approximately $1.08 million on April 3, 2023 and a conditional payment of $0.18 million on June 1, 2023.

Pursuant to the March 31 Amendment all deadlines in the Texas Action have been tolled through June 15, 2023.

As of the filing date of this report, no settlement has been reached.

BOEM Additional Financial Assurance (Supplemental Pipeline Bonds). To cover the various obligations of lessees and rights-of-way holders operating in federal waters of the Gulf of Mexico, BOEM evaluates an operator's financial ability to carry out present and future obligations to determine whether the operator must provide additional security beyond the statutory bonding requirements. Such obligations include the cost of plugging and abandoning wells and decommissioning pipelines and platforms at the end of production or service activities. Once plugging and abandonment work has been completed, the collateral backing the financial assurance is released by BOEM.

BDPL historically maintained $0.9 million in financial assurance to BOEM for the decommissioning of its trunk pipeline offshore in federal waters. Following an agency restructuring of the financial assurance program, in March 2018 BOEM ordered BDPL to provide additional financial assurance totaling approximately $4.8 million for five (5) existing pipeline rights-of-way. In June 2018, BOEM issued BDPL INCs for each right-of-way that failed to comply. BDPL appealed the INCs to the IBLA. Although the IBLA granted multiple extension requests, the Office of the Solicitor of the U.S. Department of the Interior indicated that BOEM would not consent to further extensions. The solicitor's office signaled that BDPL's adherence to milestones identified in an August 2019 meeting between management and BSEE may help in future discussions with BOEM related to the INCs. Decommissioning of these assets will significantly reduce or eliminate the amount of financial assurance required by BOEM, which may serve to partially or fully resolve the INCs.

BDPL's pending appeal of the BOEM INCs does not relieve BDPL of its obligations to provide additional financial assurance or of BOEM's authority to impose financial penalties. There can be no assurance that we will be able to meet additional financial assurance (supplemental pipeline bond) requirements. If BDPL is required by

BOEM to provide significant additional financial assurance (supplemental pipeline bonds) or is assessed significant penalties under the INCs, we will experience a significant and material adverse effect on our operations, liquidity, and financial condition.

We are currently unable to predict the outcome of the BOEM INCs. Accordingly, we did not record a liability on our consolidated balance sheets as of December 31, 2022 and 2021. At both December 31, 2022 and 2021, BDPL maintained approximately $0.9 million in pipeline rights-of-way surety bonds issued to BOEM through RLI Corp. Of the pipeline rights-of-way bonds, $0.7 million was credit-backed and $0.2 million was cash-backed.

OSHA Settlement Agreement. In September 2022, we entered into an Informal Settlement Agreement with OSHA related to process safety management violations at the Nixon refinery. Under the agreement, we paid penalties totaling $0.05 million in November 2022. We remediated a significant portion of identified violations prior to December 31, 2022. Most of the remaining violations were remediated prior to March 31, 2023. Work on the final violation is in progress, and we expect to complete the work in April 2023. Failing to abide by the terms of the agreed could result in additional fines.

TCEQ Proposed Agreed Order. In October 2021, LRM received a proposed agreed order from the TCEQ for alleged solid and hazardous waste violations discovered during an investigation from January to March 2020. The proposed agreed order assessed an administrative penalty of approximately $0.4 million and identified actions needed to correct the alleged violations. We are currently seeking to negotiate a reduced penalty amount. In May 2022, management met with the TCEQ to review the alleged solid hazardous waste violations. As follow-up to the meeting, LRM provided additional documentation to the TCEQ in a June 2022 letter. On March 29, 2023, TCEQ requested a meeting in April 2023 to review LRM's submissions to date. We recorded a liability for the maximum proposed amount of $0.4 million on our consolidated balance sheets within accrued expenses and other current liabilities as of December 31, 2022 and 2021. We cannot currently estimate when the TCEQ hazardous waste matter will be resolved or predict the outcome of the violations.

Pilot Dispute Related to Set-Off Payments. In October 2021, NPS repaid all obligations owed to Pilot under the Amended Pilot Line of Credit. However, in a letter from NPS to Pilot dated October 28, 2021, NPS disputed approximately $0.3 million in set-off payments between Pilot and NPS. As of the filing date of this report, the amount remained in dispute between the parties.

Defaults under Secured Loan Agreements. We are currently in default under certain of our secured loan agreements with third parties and related parties. See "Notes (1), (3), and (10)" to our consolidated financial statements for additional disclosures related to third-party and related-party debt, defaults on such debt, and the potential effects of such defaults on our business, financial condition, and results of operations. If third parties exercise their rights and remedies due to defaults under our secured loan agreements, our business, financial condition, and results of operations will be materially adversely affected.

Counterparty Contract-Related Dispute. As of the filing date of this report, we were involved in a contract-related dispute with Tartan involving a revenue sharing-arrangement for the storage and sale of crude oil. Management is working to resolve the dispute amicably; however, the potential outcome is unknown. Management does not believe that the contract-related dispute will have a material adverse effect on our financial position, earnings, or cash flows. However, there can be no assurance that management's efforts will result in a manageable outcome.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our Common Stock trades on the OTCQX U.S. tier of the OTC Markets under the ticker symbol "BDCO." The quotations reflect inter-dealer prices, without adjustment for retail mark-ups, markdowns or commissions and may not represent actual transactions.

We had 14,921,968 shares and 12,693,514 shares of Common Stock outstanding at December 31, 2022 and 2021, respectively. Affiliates controlled approximately 83% of the voting power of our Common Stock as of the filing date of this report. See "Part I, Item 1A. Risk Factors" for risks associated with investments in our Common Stock.

Stockholders

We had 272 and 270 record holders at December 31, 2022 and 2021, respectively. We had approximately 3,000 beneficial holders of our Common Stock at both December 31, 2022 and 2021.

Dividends

Shareholders are entitled to receive such dividends as may be declared by our Board out of funds legally available for such purpose. However, no dividend may be declared or paid unless after-tax profit was made in the preceding fiscal year, we are in compliance with covenants in our secured loan agreements, we are current on all required debt payments, and we have received prior written concurrence from certain of our lenders.

Common Stock Issuances

Set forth below is information regarding the issuance of Common Stock by us for the twelve months ended December 31, 2022 and 2021:

Services.

- On October 27, 2022, we issued an aggregate of 24,591 restricted shares of Common Stock to certain of our non-employee, independent directors, which represents payment for services rendered to the Board for the three-month period ended September 30, 2022. The cost basis was $1.22.

- On May 12, 2022, we issued an aggregate of 252,447 restricted shares of Common Stock to certain of our non-employee, independent directors, which represents payment for services rendered to the Board for the three-month periods ended September 30, 2020, March 31, 2021, September 30, 2021, and March 31, 2022. The average cost basis was $0.55, the low was $0.33, and the high was $0.91.

Payment of Debt.

- On September 6, 2022, we issued an aggregate of 98,336 restricted shares of Common Stock to Jonathan Carroll, which represents payment of the common stock component under the LE Amended and Restated Guaranty Fee Agreement and LRM Amended and Restated Guaranty Fee Agreement for monthly periods from April 2022 to June 2022. The average cost basis was $0.86, the low was $0.58, and the high was $1.26.

- On May 12, 2022, we issued an aggregate of 1,853,080 restricted shares of Common Stock to Jonathan Carroll, which represents payment of the common stock component under the LE Amended and Restated Guaranty Fee Agreement and LRM Amended and Restated Guaranty Fee Agreement for monthly periods from April 2020 through March 2022. The average cost basis was $0.42, the low was $0.27, and the high was $0.64.

The issuance of these securities were exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act.

ITEM 6. SELECTED FINANCIAL DATA

[Reserved]

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis is management's perspective of our current financial condition and results of operations and should be read in conjunction with "Important Information Regarding Forward-Looking Statements," "Part I, Item 1A. Risk Factors," and "Part II, Item 8. Financial Statements and Supplementary Data" included in this report.

This discussion and analysis includes the years ended December 31, 2022 and 2021 and comparison between such periods. The discussions of the year ended December 31, 2020 and year-to-year comparisons between the years ended December 31, 2021 and 2020 that are not included in this report can be found in "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, which was filed on April 1, 2022, and such discussions are incorporated by reference into this report.

Overview and Outlook

Company Overview. Blue Dolphin is an independent downstream energy company operating in the Gulf Coast region of the United States. Our subsidiaries operate a light sweet-crude, 15,000-bpd crude distillation tower with more than 1.2 million bbls of petroleum storage tank capacity in Nixon, Texas. Our assets are primarily organized in two segments: refinery operations (owned by LE) and tolling and terminaling services (owned by LRM and NPS). Subsidiaries that are reflected in corporate and other include BDPL (inactive pipeline assets), BDPC (inactive leasehold interests in oil and gas wells), and BDSC (administrative services). Blue Dolphin was formed in 1986 as a Delaware corporation and is traded on the OTCQX under the ticker symbol "BDCO".

An Affiliate, combined with Jonathan Carroll, controlled approximately 83% of the voting power of our Common Stock as of the filing date of this report. An Affiliate also operates and manages all Blue Dolphin properties, funds working capital requirements during periods of working capital deficits, guarantees certain of our third-party secured debt, and is a significant customer of our refined products. Blue Dolphin and certain of its subsidiaries are currently parties to a variety of agreements with Affiliates. See "Part II, Item 8. Financial Statements and Supplementary Data – Note (3)" for additional disclosures related to Affiliate agreements, arrangements, and risks associated with working capital deficits.

Going Concern. In accordance with GAAP accounting standards, we evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that our consolidated financial statements are issued. While results of operations were significantly improved for the twelve months ended December 31, 2022 versus the prior twelve month period, management determined that certain factors continue to present substantial doubt about our ability to continue as a going concern. Factors include significant current debt, which impacts our ability to meet debt covenants, and historical net losses and working capital and equity deficits. Our consolidated financial statements assume we will continue as a going concern and do not include any adjustments that might result from this uncertainty. Management is working to alleviate these factors by entering into forbearance agreements with lenders, maximizing operation of the Nixon refinery given favorable refining margins, and pursuing opportunities to obtain capital and/or refinance debt. Our ability to continue as a going concern depends on sustained positive operating margins and adequate working capital for, amongst other requirements, purchasing crude oil and condensate and making payments on long-term debt. If we are unable to process crude oil and condensate into sellable refined products or make required debt payments, we may consider other options. These options could include selling assets, raising additional debt or equity capital, cutting costs, reducing cash requirements, restructuring debt obligations, or filing a petition for bankruptcy.

Business Operations Update. Our results for the year ended December 31, 2022 were favorably impacted by the ongoing recovery in the worldwide demand for petroleum-based transportation fuels, particularly jet fuel, while the worldwide supply of those products remained constrained. This supply and demand imbalance contributed to increases in the market prices of petroleum-based transportation fuels (as well as crude oil and other feedstocks that are processed to make these products) and thus in refining margins. Supply has remained constrained for a variety of reasons, including, but not limited to, effects from refinery closures and disruptions in the crude oil and petroleum-based products markets resulting from the Russian-Ukrainian military conflict. Some refineries closed over the past two years and other refineries ceased crude oil processing in favor of transitioning to renewable fuel production. In addition, these negative impacts to the supply of petroleum-based products were exacerbated during the second quarter of 2022 by the Russian-Ukrainian military conflict. Due to the conflict, countries and private market participants responded by refraining from purchasing and transporting Russian crude oil and petroleum-based products; however, some of the uncertainties and related impacts began dissipating during the second half of 2022.

The strong demand for our products, particularly jet fuel, and the increase in refining margins were the primary contributors to us reporting $32.9 million in net income for the twelve months ended December 31, 2022. Our operating results for 2022, including operating results by segment, can be found within this "Management's Discussion and Financial Analysis of Financial Condition and Results of Operations" within 'Results of Operations.'

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Our operations generated $16.3 million in cash for the twelve months ended December 31, 2022. We used cash from operations to pay $7.0 million to Veritex and GNCU, our largest lenders, during the same period [as described in "Part II, Item 8. Financial Statements and Supplementary Data – Note (10)"] and made $0.1 million in capital improvements to the Nixon facility. At December 31, 2022, we had $0.5 million in liquidity. The components of our liquidity and descriptions of our cash flows, capital investments, and other matters impacting our liquidity and capital resources can be found within this "Management's Discussion and Financial Analysis of Financial Condition and Results of Operations" within 'Liquidity and Capital Resources.'

General Trends and Outlook. The economic effects from the COVID-19 pandemic on our business were and may again be significant. Although our business has recovered since the onset of the pandemic in March 2020, there continues to be uncertainty and unpredictability about the lingering impacts of COVID-19 to the worldwide economy, including in connection with the spread of variants and resulting restrictions, that could negatively affect our business, financial condition, results of operations , and liquidity in future periods. Additionally, many uncertainties remain with respect to the supply and demand imbalance in the petroleum-based products market worldwide due to the Russian-Ukrainian military conflict and a global economic recession. While it is difficult to predict the ultimate economic impacts of COVID-19, the Russian-Ukrainian military conflict, recession, and inflation may have on us, we have noted key factors below that impacted our results of operations in 2022 and will likely impact our results of operations during 2023:

- Jet fuel commodity pricing and demand.
- Light crude oil commodity pricing and demand.

Liquidity and Access to Capital Markets. We continue to actively explore additional financing to meet working capital needs or refinance and restructure debt. During the twelve months ended December 31, 2022 and 2021, we secured $1.5 million and $10.5 million, respectively, in working capital from CARES Act loans. There can be no assurance that we will be able to raise additional capital on acceptable terms, or at all, or refinance existing debt. If we are unable to raise sufficient additional capital, we may not, in the short term, be able to purchase crude oil and condensate or meet debt payment obligations. In the long term, we may not be able to withstand business disruptions, such as those related to COVID-19, or execute our business strategy. We may have to consider other options, such as selling assets, raising additional debt or equity capital, seeking bankruptcy protection, or ceasing operations.

Changes in Regulations. Our operations and the operations of our customers have been, and will continue to be, affected by political developments and federal, state, tribal, local, and other laws and regulations that are increasing in number and becoming more stringent and complex. These laws and regulations include, among other things, permitting requirements, environmental protection measures such as limitations on methane and other GHG emissions, and renewable fuels standards. The number and scope of the regulations with which we and our customers must comply has a meaningful impact on our and their businesses, and new or revised regulations, reinterpretations of existing regulations, and permitting delays or denials could adversely affect the profitability of our assets.

Business Strategy and Accomplishments

Our primary business objectives are to improve our financial profile and refining margins by executing the below strategies, modified as necessary, to reflect changing economic conditions and other circumstances:

Optimize Existing Asset Base	· Maintain safe operations and enhance health, safety, and environmental systems. · Plan and manage turnarounds and downtime.
Improve Operational Efficiencies	· Reduce or streamline variable costs incurred in production. · Increase throughput capacity and optimize product slate. · Increase tolling and terminaling revenue.
Seize Market Opportunities	· Leverage existing infrastructure to engage in renewable energy projects. · Take advantage of market opportunities as they arise.

Optimize Existing Asset Base. Given continued favorable refining margins, we delayed performing the Nixon facility's maintenance turnaround until the second quarter of 2023 in order to maximize refinery runs. Although the refinery experienced a similar amount of downtime during the twelve months ended December 31, 2022 (22 days) compared to the twelve months ended December 31, 2021 (23 days), we experienced fewer days of crude deficiencies associated with cash constraints during the 2022 period. During 2022, we focused on improvements in day-to-day plant operations, identifying safety and mechanical process improvements to optimize plant operations.

Improve Operational Efficiencies. We carefully managed product mix, product inventory levels, and crude acquisition to maintain improvements to refinery throughput, production, and sales during the twelve months ended December 31, 2022 compared to the same period in 2021. Refinery charge and production capacity utilization rates improved more than 5% each to 87.7% and 85.5%, respectively, during the twelve months ended December 31, 2022 from 81.8% and 79.8%, respectively, during the twelve months ended December 30, 2021.

Seize Market Opportunities. As a result of higher commodity prices and increased capacity utilization rates, we experienced a significant improvement in gross profits. Gross profit totaled $46.1 million for the twelve months ended December 31, 2022 compared to $0.9 million for the twelve months ended December 31, 2021.

In 2021, we announced plans to leverage our existing infrastructure to establish adjacent lines of business, capture growing market opportunities, and capitalize on green energy growth. Rising demand for green energy is attributable to a variety of factors, including growing public support, U.S. governmental actions to increase energy independence, and environmental concerns related to climate change. Our initial focus includes commercialization opportunities in hydrogen, carbon capture and storage, carbon offsets and emerging technologies. During the twelve months ended December 31, 2022, management had discussions with several potential commercial partners and explored project-based opportunities through government loans as vehicles to enter the renewable energy space. Management expects these efforts to continue in 2023. As discussed throughout this report, our 'going concern' opinion may impact our renewable energy endeavors. Furthermore, reductions or modifications to, or the elimination of, governmental incentives or policies that support renewable energy or the imposition of additional taxes, tariffs, duties, or other assessments on renewable energy projects, could result in, among other things, the lack of a satisfactory market for the development and/or financing of new renewable energy projects and us abandoning the development of renewable energy projects.

Successful execution of our business strategy depends on multiple factors. These factors include (i) having adequate working capital to meet operational needs and regulatory requirements, (ii) maintaining safe and reliable operations at the Nixon facility, (iii) meeting contractual obligations, (iv) having favorable margins on refined products, and (v) collaborating with new partners to develop and finance clean energy projects. Our business strategy involves risks. Accordingly, we cannot assure investors that our plans will be successful. If we are unsuccessful, we would likely have to consider other options, such as selling assets, raising additional debt or equity capital, cutting costs or otherwise reducing our cash requirements, negotiating with our creditors to restructure our applicable obligations, or seeking protection under bankruptcy laws. In such a case, the trading price of our common stock and the value of an investment in our common stock could significantly decrease, which could lead to holders of our common stock losing their investment in our common stock in its entirety.

Downstream Operations

Our refinery operations segment consists of the following assets and operations:

Property	Key Products Handled	Operating Subsidiary	Location
Nixon facility · Crude distillation tower (15,000 bpd) · Petroleum storage tanks (operations support) · Loading and unloading facilities · Land (56 acres)	Crude Oil Refined Products	LE	Nixon, Texas

Crude Oil and Condensate Supply. Operation of the Nixon refinery depends on our ability to purchase adequate amounts of crude oil and condensate. We have a long-term crude supply agreement in place with Tartan. The volume-based Crude Supply Agreement expires when we receive 24.8 million net bbls of crude oil. After that, the Crude Supply Agreement automatically renews for successive one-year terms (each such term, a renewal term). Tartan must provide notice of non-renewal at least 60 days before the expiration of any renewal term. For the twelve months ended December 31, 2022 and 2021, we received approximately 4.5 million bbls, or 18.4%, and 4.2 million bbls, or 17.0%, respectively, of the contracted volume under the Crude Supply Agreement. As of December 31, 2022, we received approximately 13.6 million bbls, or 54.8%, of the total allowable contracted volume under the Crude Supply Agreement. At December 31, 2022, accounts payable for crude oil and condensate was $0. As of December 31, 2022, 100% of our crude oil was sourced from Tartan under the Crude Supply Agreement.

Related to the Crude Supply Agreement, Tartan stores crude oil at the Nixon facility under a terminal services agreement dated as of June 1, 2019. Under the terminal services agreement, crude oil is stored at the Nixon facility at a specified rate per bbl of the storage tank's shell capacity. The terminal services agreement renews on a one-year evergreen basis. Tartan must provide notice of non-renewal at least 60 days before the expiration of any renewal term. However, the terminal services agreement will automatically terminate upon expiration or termination of the Crude Supply Agreement.

Our financial health has been materially and adversely affected by defaults in our secured loan agreements, significant current debt, margin volatility, historical net losses and working capital and equity deficits. If Tartan terminates the Crude Supply Agreement or terminal services agreement, our ability to acquire crude oil and condensate could be adversely affected. If producers experience crude supply constraints and increased transportation costs, our crude acquisition costs may rise, or we may not receive sufficient amounts to meet our needs.

Products and Markets. Our market is the Gulf Coast region of the U.S., which is represented by the EIA as Petroleum Administration for PADD 3. We sell our products primarily in the U.S. within PADD 3. Occasionally, we sell refined products to customers that export to other countries, such as low sulfur diesel to Mexico.

The Nixon refinery's product slate is adjusted based on market demand. We currently produce a single finished product – jet fuel – and several intermediate products, including naphtha, HOBM, and AGO. Our jet fuel is sold to an Affiliate, which is HUBZone certified. The product sales agreement with the Affiliate has a one-year term expiring the earliest to occur of March 31, 2024 plus 30-day carryover or delivery of the maximum quantity of jet fuel. Our intermediate products are primarily sold in nearby markets to wholesalers and refiners as a feedstock for further blending and processing.

Customers. Customers for our refined products include distributors, wholesalers, and refineries primarily in the lower portion of the Texas Triangle (the Houston – San Antonio – Dallas/Fort Worth area). We have bulk term contracts in place with most of our customers, including month-to-month, six months, and up to one-year terms. Certain of our contracts require our customers to prepay and us to sell fixed quantities and/or minimum quantities of finished and intermediate petroleum products. Many of these arrangements are subject to periodic renegotiation on a forward-looking basis, which could result in higher or lower relative prices on future sales of our refined products.

Competition. Many of our competitors are larger than us and are engaged on a national or international level in many segments of the oil and gas industry, including exploration and production, gathering and transportation, and marketing. These competitors may have greater flexibility in responding to or absorbing market changes occurring in one or more of these business segments. We compete primarily based on cost. Due to the low complexity of our simple "topping unit" refinery, we can be relatively nimble in adjusting our refined products slate because of changing commodity prices, market demand, and refinery operating costs.

Safety and Downtime. We operate the refinery in a manner that is materially consistent with industry safety practices and standards. EPA, OSHA, and comparable state and local regulatory agencies provide oversight for personnel safety, process safety management, and risk management to prevent or minimize the accidental release of toxic, reactive, flammable, or explosive chemicals. Most of our storage tanks are equipped with leak detection devices. We also have response and control plans in place for spill prevention and emergencies.

The Nixon refinery periodically undergoes planned and unplanned temporary shutdowns. We typically complete a planned turnaround annually to repair, restore, refurbish, or replace refinery equipment. However, the timing of planned turnarounds is adjusted to capitalize on favorable market conditions. Occasionally, unplanned shutdowns occur. Unplanned downtime can occur for a variety of reasons; however, common reasons for unplanned downtime include repair/replacement of disabled equipment, crude deficiencies associated with cash constraints, high temperatures, and power outages. In 2021, the Nixon refinery did not incur significant damage due to Winter Storm Uri; however, the facility lost external power for 10 days due to the storm. In December 2022, the Nixon refinery was idled for 5 days due to an unnamed winter ice storm.

We are particularly vulnerable to operation disruptions because all our refining operations occur at a single facility. Any scheduled or unscheduled downtime results in lost margin opportunity, reduced refined products inventory, and potential increased maintenance expense, all of which could reduce our ability to meet our payment obligations.

Midstream Operations

Our tolling and terminaling segment consists of the following assets and operations:

Property	Key Products Handled	Operating Subsidiary	Location
Nixon facility · Petroleum storage tanks (third-party leasing) · Loading and unloading facilities	Crude Oil Refined Products	LRM, NPS	Nixon, Texas

Products and Customers. The Nixon facility's petroleum storage tanks and infrastructure are primarily suited for crude oil and condensate and refined products, such as naphtha, jet fuel, diesel, and fuel oil. Storage customers are typically refiners in the lower portion of the Texas Triangle (the Houston – San Antonio – Dallas/Fort Worth area). Shipments are received and redelivered from within the Nixon facility via pipeline or from third parties via truck. Contract terms range from month-to-month to three years.

Operations Safety. Our midstream operations are operated in a manner materially consistent with industry safe practices and standards. These operations are subject to OSHA regulations and comparable state and local regulators. Storage tanks used for terminal operations are designed for crude oil and condensate and refined products, and most are equipped with appropriate controls that minimize emissions and promote safety. Our terminal operations have response and control plans, spill prevention and other programs to respond to emergencies.

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Inactive Operations

We own other pipeline and facilities assets and have leasehold interests in oil and gas properties. These assets are inactive. We account for these inactive operations in 'corporate and other.' Our pipeline assets have been fully impaired since 2016 and our oil and gas leasehold interests have been fully impaired since 2011. Our pipeline assets and oil and gas leasehold interests had no revenue during the twelve months ended December 31, 2022 and 2021. See "Part II, Item 8. Financial Statements and Supplementary Data – Note (15)" related to pipelines and platform decommissioning requirements and related risks.

Property	Operating Subsidiary	Location
Freeport facility · Crude oil and natural gas separation and dehydration · Natural gas processing, treating, and redelivery · Vapor recovery unit · Two onshore pipelines · Land (162 acres)	BDPL	Freeport, Texas
Offshore Pipelines (Trunk Line and Lateral Lines)	BDPL	Gulf of Mexico
Oil and Gas Leasehold Interests	BDPC	Gulf of Mexico

Pipeline and Facilities Safety.
Although our pipeline and facility assets are inactive, they require upkeep and maintenance and are subject to safety regulations under OSHA, PHMSA, BOEM, BSEE, and comparable state and local regulators. We have response and control plans, spill prevention and other programs to respond to emergencies related to these assets.

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Results of Operations

A discussion and analysis of the factors contributing to our consolidated financial results of operations is presented below and should be read in conjunction with our financial statements in "Part I, Item 1. Financial Statements". The financial statements, together with the following information, are intended to provide investors with a reasonable basis for assessing our historical operations, but they should not serve as the only criteria for predicting future performance.

Major Influences on Results of Operations. Our results of operations and liquidity are highly dependent upon the margins that we receive for our refined products. The dollar per bbl commodity price difference between crude oil and condensate (input) and refined products (output) is the most significant driver of refining margins, and they have historically been subject to wide fluctuations. When the spread between these commodity prices decreases, our margins are negatively affected. To improve margins, we must maximize yields of higher value finished petroleum products and minimize costs of feedstocks and operating expenses. Although an increase or decrease in the commodity price for crude oil and other feedstocks generally results in a similar increase or decrease in commodity prices for finished petroleum products, typically there is a time lag between the two. The effect of crude oil commodity price changes on our finished petroleum product commodity prices therefore depends, in part, on how quickly and how fully the market adjusts to reflect these changes. Unfavorable margins may have a material adverse effect on our earnings, cash flows, and liquidity.

While refining margins improved significantly during 2022 primarily due to increased commodity prices and demand, the general outlook for the oil and natural gas industry for 2023 remains unclear given uncertainty surrounding the Russian military conflict with Ukraine, recession, inflation, and COVID-19. We can provide no assurances that refining margins and demand will remain at current levels.

How We Evaluate Our Operations. Management uses certain financial and operating measures to analyze segment performance. These measures are significant factors in assessing our operating results and profitability and include: segment contribution margin (deficit), and refining gross profit (deficit) per bbl, storage tank rental revenue, operation costs and expenses, refinery throughput and production data, and refinery downtime. Segment contribution margin (deficit) and refining gross profit (deficit) per bbl are non-GAAP measures.

Segment Contribution Margin (Deficit) and Refining Gross Profit (Deficit) per Bbl

We use segment contribution margin (deficit) to evaluate the performance of our downstream and midstream operations. We use refining gross profit (deficit) per bbl as a downstream benchmark. Both measures supplement GAAP financial information presented. Management uses segment contribution margin (deficit) and refining gross profit (deficit) per bbl to analyze our results of operations, assess internal performance against budgeted and forecasted amounts, and evaluate impacts to our financial performance considering potential capital investments. These non-GAAP measures have important limitations as analytical tools. They should not be considered a substitute for GAAP financial measures. We believe these measures may help investors, analysts, lenders, and ratings agencies analyze our results of operations and liquidity in conjunction with our GAAP financial results. See "Non-GAAP Reconciliations" for a reconciliation of Non-GAAP measures to U.S. GAAP.

Storage Tank Rental Revenue and Ancillary Services Fees

Tolling and terminaling revenue primarily represents storage tank rental fees and ancillary services fees associated with customer tank rental agreements. As a result, tank rental revenue and ancillary services fees combined are one of the measures management uses to evaluate the performance of our tolling and terminaling business segment.

Operation Costs and Expenses

We manage operating costs and expenses in tandem with meeting environmental and safety requirements and objectives and maintaining the integrity of our assets. Operating costs and expenses are comprised primarily of labor expenses, repairs and other maintenance costs, and utility costs. Expenses for refinery operations generally remain stable across broad ranges of throughput volumes, but they can fluctuate from period to period depending on the mix of activities performed during that period and the timing of those expenses. Operation costs and expenses for tolling and terminaling operations are relatively fixed.

Refinery Throughput and Production Data

The amount of revenue we generate from the refinery operations business segment primarily depends on the volumes of crude oil that we process into refined products and the volume of refined products sold to customers. These volumes are affected by the supply and demand of, and demand for, crude oil and refined products in the markets served directly or indirectly by our assets, as well as refinery downtime.

Refinery Downtime

The Nixon refinery periodically experiences planned and unplanned temporary shutdowns. Any scheduled or unscheduled downtime will result in lost margin opportunity, potential increased maintenance expense, and a reduction of refined products inventory, which could reduce our ability to meet our payment obligations.

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Consolidated Results. Our consolidated results of operations include certain other unallocated corporate activities and the elimination of intercompany transactions and therefore do not equal the sum of the operating results of our refinery operations and tolling and terminaling business segments.

Twelve Months Ended December 31, 2022 ("2022") Versus December 31, 2021 ("2021")

Overview. Net income for 2022 was $32.9 million, or income of $2.34 per share, compared to a net loss of $12.8 million, or a loss of $1.01 per share, in 2021. The $45.7 million, or $3.35 per share, increase in net income between the periods was the result of favorable refining margins and improved product demand. The net loss in 2021 was also due to lower refinery margins, 23 days of refinery downtime; of the 23 days, 13 days related to crude deficiencies associated with cash constraints and 10 days were associated with Winter Storm Uri. Although 2022 refinery downtime totaled 22 days (5 of which related to an unnamed winter ice storm), margins were higher.

Total Revenue from Operations. Total revenue from operations increased 62% to $487.5 million for 2022 from $300.8 million for 2021. Increased commodity prices primarily drove refinery operations revenue higher in 2022; however, higher volume sales also contributed to the increase. Tolling and terminaling revenue increased nearly 20% between the periods to $4.4 million.

Total Cost of Goods Sold. Total cost of goods sold increased approximately 47% to $441.4 million for 2022 from $299.9 million for 2021. The significant increase related to higher crude acquisition costs and higher throughput.

Gross Profit. Gross profit totaled $46.1 million for 2022 compared to gross profit of $0.9 million for 2021. Higher commodity prices and improved refinery uptime positively impacted refinery margins in 2022 compared to 2021.

General and Administrative Expenses. General and administrative expenses decreased $0.1 million, or nearly 4%, from $3.0 million in 2021 to $2.9 million in 2022. The decrease primarily related to lower legal fees.

Depreciation and Amortization. Depreciation and amortization expenses remained flat at $2.8 million for both 2022 and 2021.

Total Other Income (Expense). Total other expense in 2022 totaled $5.9 million compared to total other expense of $6.2 million in 2021, representing a decrease of approximately $0.3 million. The decrease was due to lower related party interest expense in 2022 compared to 2021. Total other expense primarily relates to interest expense associated with third-party and related party secured loan agreements.

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Downstream Operations. Our refinery operations business segment is owned by LE. Assets within this segment consist of a light sweet-crude, 15,000-bpd crude distillation tower, petroleum storage tanks, loading and unloading facilities, and approximately 56 acres of land. Refinery operations revenue is derived from refined product sales.

2022 Versus 2021

Refinery Downtime. Refinery downtime decreased from 23 days in 2021 to 22 days in 2022. Refinery downtime in 2021 related to crude deficiencies associated with cash constraints (13 days) and downtime associated with Winter Storm Uri (10 days). Refinery downtime in 2022 related to maintenance (13 days), weather associated with an unnamed ice storm (5 days), and crude deficiencies associated with cash constraints (4 days).

Refining Gross Profit (Deficit). Refining gross profit was $41.6 million for 2022 compared to gross deficit of $2.8 million in 2021, representing a significant increase of $44.4 million. The significant increase in 2022 related to higher refining margins, improved product demand, and improved throughput. Refining gross deficit in 2021 was the result of lower margins and COVID-19 market fluctuations.

Refining Gross Profit (Deficit) per Bbl. On a per bbl basis, refining gross profit was $9.78 for 2022 compared to a gross deficit of $0.69 for 2021, representing a significant increase of $10.47 per bbl. The increase related to favorable commodity prices and increased refined product demand.

Segment Contribution Margin (Deficit). Refinery operations segment contribution margin improved $44.6 million from a deficit of $3.4 million in 2021 to $41.2 million in 2022 due to higher refining margins.

	Twelve Months Ended December 31, 2022	2021
	(in thousands)	
Refined product sales	**$ 483,061**	$ 297,103
Less: total cost of goods sold[1]	**(441,433)**	(299,906)
Refining gross profit (deficit)	**41,628**	(2,803)
Sales (Bbls)	**4,256**	4,071
Refining gross profit (deficit) per bbl	**$ 9.78**	$ (0.69)

	Twelve Months Ended December 31, 2022	2021
	(in thousands)	
Refined product sales	**$ 483,061**	$ 297,103
Less: intercompany processing fees[1]	**(2,583)**	(2,457)
Less: operation costs and expenses	**(439,292)**	(298,082)
Segment contribution margin (deficit)	**$ 41,186**	$ (3,436)

[1] Fees associated with an intercompany tolling agreement related to naphtha volumes.

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Midstream Operations. Our tolling and terminaling business segment is owned by LRM and NPS. Assets within this segment include petroleum storage tanks and loading and unloading facilities. Tolling and terminaling revenue is derived from storage tank rental fees, ancillary services fees (such as for in-tank blending), and tolling and reservation fees for use of the naphtha stabilizer.

2022 Versus 2021

Tolling and Terminaling Revenue. Storage tank rental and ancillary services fees increased $0.7 million from $3.7 million in 2021 to $4.4 million in 2022. Intercompany processing fees increased 5% from $2.5 million in 2021 to $2.6 million in 2022. Processed naphtha volumes increased nearly 34% between the two periods.

Segment Contribution Margin. Tolling and terminaling segment contribution margin increased 12% from $4.3 million in 2021 to $4.9 million in 2022. The increase related to higher tank rental and ancillary service fees and slightly higher operation costs and expenses.

	Twelve Months Ended December 31, 2022	2021
	(in thousands)	
Tank storage rental and ancillary services fees	**$ 4,443**	$ 3,717
Intercompany processing fees[1]	**2,583**	2,457
Less: operation costs and expenses	**(2,142)**	(1,825)
Segment contribution margin	**$ 4,884**	$ 4,349

[1] Fees associated with an intercompany tolling agreement related to naphtha volumes.

Non-GAAP Reconciliations.

Reconciliation of Segment Contribution Margin (Deficit)

	Refinery Operations 2022	Refinery Operations 2021	Tolling and Terminaling 2022	Tolling and Terminaling 2021	Corporate and Other 2022	Corporate and Other 2021	Total 2022	Total 2021
	(in thousands)							
Segment contribution margin (deficit)	**$ 41,186**	$ (3,436)	**$ 4,884**	$ 4,349	**$ (221)**	$ (197)	**$ 45,849**	$ 716
General and administrative expenses[1]	**(1,682)**	(1,549)	**(427)**	(343)	**(1,860)**	(2,742)	**(3,969)**	(4,634)
Depreciation and amortization	**(1,224)**	(1,214)	**(1,368)**	(1,362)	**(206)**	(204)	**(2,798)**	(2,780)
Interest and other non-operating expenses, net	**(2,753)**	(2,779)	**(1,433)**	(1,649)	**(1,697)**	(1,715)	**(5,883)**	(6,143)
Income (loss) before income taxes	**35,527**	(8,978)	**1,656**	995	**(3,984)**	(4,858)	**33,199**	(12,841)
Income tax expense	**-**	-	**-**	-	**(224)**	-	**(307)**	-
Net income (loss)	**$ 35,527**	$ (8,978)	**$ 1,656**	$ 995	**$ (4,208)**	$ (4,858)	**$ 32,892**	$ (12,841)

(1) General and administrative expenses within refinery operations include the LEH operating fee, related party and accretion of asset retirement obligations.

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Capital Resources and Liquidity

We generally rely on revenue from operations, including sales of refined products and rental of petroleum storage tanks, Affiliates, and financing to meet our liquidity needs. Profitability from favorable refining margins and increased product demand in 2022 improved cash flow from operations. Continued liquidity improvement related to favorable market conditions will enable us to increasingly meet our needs through cash flow from operations. Our short-term working capital needs are primarily related to: (i) purchasing crude oil and condensate to operate the Nixon refinery, (ii) reimbursing LEH for direct operating expenses and paying the LEH operating fee under the Amended and Restated Operating Agreement, (iii) servicing debt, (iv) maintaining and improving the Nixon facility through capital expenditures, and (v) meeting regulatory compliance requirements. Our long-term working capital needs are primarily related to repayment of long-term debt obligations.

During 2022 and 2021, we successfully secured an additional $1.5 million and $10.5 million, respectively, in working capital through CARES Act loans. In October 2021, NPS repaid all obligations owed to Pilot under the Amended Pilot Line of Credit. We also continue to actively explore additional financing to meet working capital needs or refinance and restructure debt. However, there can be no assurance that we will be able to raise additional capital on acceptable terms, or at all.

Refining margins, which are affected by commodity prices and refined product demand, are volatile, and a reduction in refining margins will adversely affect the amount of cash we will have available for working capital. Similarly, the Russian military conflict with Ukraine, COVID-19, recession, and inflation continue to evolve, and the extent to which these factors may impact our business, financial condition, liquidity, results of operations, and future prospects will depend on future developments, which cannot be predicted with any degree of confidence.

If refining margins become unfavorable for an extended period, reducing available working capital, and we are unable to raise additional capital, we may not, in the short term, be able to purchase crude oil and condensate or meet debt payment obligations. In the long term, we may not be able to withstand business disruptions or execute our business strategy. We may have to consider other options, such as selling assets, raising additional debt or equity capital, seeking bankruptcy protection, or ceasing operating.

Working Capital

We had $45.2 million and $78.5 million in working capital deficits at December 31, 2022 and 2021, respectively. Excluding the current portion of long-term debt, we had $2.1 million in working capital and $15.5 million in working capital deficits at December 31, 2022 and 2021, respectively. The significant improvement in working capital between the twelve-month periods was primarily due to favorable refining margins and increased gross profit. During the twelve months ended December 31, 2022, continued liquidity improvement related to favorable market conditions enabled us to increasingly meet our needs through cash flow from operations.

Cash and cash equivalents totaled $0.5 million and $0.01 million at December 31, 2022 and 2021, respectively. Restricted cash (current portion) totaled $0 and $0.05 million at December 31, 2022 and 2021, respectively. Restricted cash, noncurrent totaled $1.0 million and $0 at December 31, 2022 and 2021, respectively.

Sources and Use of Cash

Components of Cash Flows

	Twelve Months Ended December 31, 2022	Twelve Months Ended December 31, 2021
Cash Flows Provided By (Used In):		
Operating activities	**$ 16,272**	$ (6,056)
Investing activities	**(102)**	-
Financing activities	**(14,706)**	5,002
Increase in Cash and Cash Equivalents	**$ 1,464**	$ (1,054)

Cash Flow from Operations

We had cash flow from operations of $16.3 million for 2022 compared to a cash flow deficit from operations of $6.1 million for 2021. The $22.3 million improvement in cash flow from operations between the periods was due to profit from operations, which was offset by a buildup in inventory.

Capital Expenditures

Capital expenditures totaled $0.1 million and $0 in 2022 and 2021, respectively. Capital expenditures in 2022 related to the addition of a portable cooling tower to combat increased summer temperatures and new fire equipment. Due to continued uncertainties surrounding commodity pricing and refined product demand, the Russian military conflict with Ukraine, recession, inflation, and COVID-19, we anticipate limited capital expenditures over the next twelve months. However, to the extent we are able to capitalize on green energy growth opportunities, we may finance capital expenditures through project-based government loans.

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We account for our capital expenditures in accordance with GAAP. We also classify capital expenditures as 'maintenance' if the expenditure maintains capacity or throughput or as 'expansion' if the expenditure increases capacity or throughput capabilities. Although classification is generally a straightforward process, in certain circumstances the determination is a matter of management judgment and discretion. We budget for maintenance capital expenditures throughout the year on a project-by-project basis. Projects are determined based on maintaining safe and efficient operations, meeting customer needs, complying with operating policies and applicable law, and producing economic benefits, such as increasing efficiency and/or lowering future expenses.

Debt Activities
Net proceeds from the issuance of debt totaled $1.5 million and $10.5 million in 2022 and 2021, respectively. Proceeds in 2022 represented additional principal under the BDEC Term Loan Due 2051; proceeds in 2021 reflected the original principal under the NPS Term Loan Due 2031.

A summary of payment activities to third parties and related parties follow:

Third-Party

- Veritex Loans (*in default*) – Principal, interest, late fees, and other payments (described below) to Veritex totaled $6.8 million in 2022. Interest and late fee payments to Veritex totaled $0.6 million in 2021. Pursuant to the November 2022 Veritex Forbearance Agreement, Veritex agreed to forbear from exercising any of its rights and remedies related to existing defaults and non-compliance with the financial covenants, as well as testing borrowers' future compliance with financial covenants under the LE Term Loan Due 2034 and LRM Term Loan Due 2034 through September 30, 2023. As part of the Veritex Forbearance Agreement, LE and LRM paid Veritex: (i) $4.3 million in past due principal and interest at the non-default rate (excluding late fees), (ii) $1.0 million into a payment reserve account, and (iii) $0.04 million in Veritex attorney fees. In the event that LE and LRM pay off all amounts due under the LE Term Loan Due 2034 and LRM Term Loan Due 2034 on or before September 30, 2023, Veritex also agreed to waive late fees totaling approximately $0.4 million in the aggregate. As of December 31, 2022 and the filing date of this report, LE and LRM were in compliance with the Veritex Forbearance Agreement.
- GNCU Loan (*in default*) – Required interest only payments to GNCU totaled $0.7 million and $0.01 million in 2022 and 2021, respectively. As of the filing date of this report, NPS was in default under the NPS Term Loan Due 2031 for failing to satisfy financial covenants.
- Kissick Debt (*in default*) – Under a 2015 subordination agreement, John Kissick agreed to subordinate his right to payments, as well as any security interest and liens on the Nixon facility's business assets, in favor of Veritex as holder of the LE Term Loan Due 2034. As of the filing date of this report, LE was in default under the Kissick Debt related to past due payment obligations.
- SBA Loans – No payments were required under the BDEC Term Loan Due 2051, LE Term Loan Due 2050, or the NPS Term Loan Due 2050 for the twelve months ended December 31, 2022 and 2021 due to COVID-related payment deferrals.
- Equipment Loan Due 2025 – Principal and interest payments to Texas First totaled $0.02 million in both 2022 and 2021.
- Amended Pilot Line of Credit – As described elsewhere in this report, in October 2021, NPS repaid all obligations owed to Pilot under the Amended Pilot Line of Credit. From June 2020 to October 2021, Pilot applied payments owed to NPS under two terminal services agreements against NPS' payment obligations to Pilot under the Amended Pilot Line of Credit. The tank lease payment setoff totaled $1.9 million in 2021. However, in a NPS letter to Pilot in October 2021, NPS disputed approximately $0.3 million in Pilot setoff payments. As of the filing date of this report, the amount remained in dispute between the parties.

Related-Party

- June LEH Note and BDPL-LEH Loan Agreement (*in default*) – Net activity on related-party debt totaled $15.2 million in 2022; related party debt settled through related-party accounts receivable totaled $21.1 million in 2022. Comparatively, net activity on related-party debt totaled $0.01 million in 2021; related party debt settled through related-party accounts receivable totaled $2.8 million in 2021.

  An Affiliate, combined with Jonathan Carroll, controlled approximately 83% of the voting power of our Common Stock as of the filing date of this report. An Affiliate also operates and manages all Blue Dolphin properties, funds working capital requirements during periods of working capital deficits, guarantees certain of our third-party secured debt, and is a significant customer of our refined products.

  We can provide no assurance that: (i) our assets or cash flow from operations and financing activities will be sufficient to fully repay borrowings under secured loan agreements that are in default, either upon maturity or if accelerated, (ii) LE, LRM, or NPS will be able to refinance or restructure their respective debt, and/or (iii) lenders will provide future default waivers. Defaults under our secured loan agreements and any exercise by third parties of their rights and remedies related to such defaults may have a material adverse effect on our business, the trading price of our Common Stock, and on the value of an investment in our Common Stock, and holders of our Common Stock could lose their investment in our Common Stock in its entirety. Management maintains ongoing dialogue with lenders regarding defaults and potential restructuring and refinance opportunities.

  See "Part II, Item 8. Financial Statements and Supplementary Data – Notes (3) and (10)" for additional disclosures related to related-party and third-party debt.

Total Debt and Lease Obligations
The table below summarizes our principal contractual debt and lease obligations at December 31, 2022, by expected settlement period.

	Less than 1 Year	Between 1 and 3 Years	Between 3 and 5 Years	5 Years and Later	Total
	(in thousands)				
Long-term debt less unamortized debt issue costs[(1)(2)]					
Third-party	$ 42,155	$ 190	$ 140	$ 1,992	$ 44,477
Related-party	5,211	-	-	-	5,211
Total long-term debt less debt issue costs	47,366	190	140	1,992	49,688
Lease obligations	156	-	-	-	156
	$ 47,522	$ 190	$ 140	$ 1,992	$ 49,844

(1) See "Part II, Item 8. Financial Statements and Supplementary Data – Notes (3) and (10)" for additional disclosures related to third-party and related-party debt.

(2) Excludes interest payable; at December 31, 2022, interest payable and interest payable, related party was estimated to be 9.7 million (less than 1 year), $0.1 million (between 1 and 3 years), $0.1 million (between 3 and 5 years), and $0.5 million (5 years and later).

Concentration of Customers Risk. We routinely assess the financial strength of our customers. To date, we have not experienced significant write-downs in accounts receivable balances. We believe that our accounts receivable credit risk exposure is limited.

Twelve Months Ended	Number Significant Customers	% Total Revenue from Operations	Portion of Accounts Receivable

			at December 31,
December 31, 2022	**2**	**60.4%**	**$ 0**
December 31, 2021	3	71.9%	$ 0

One of our significant customers is LEH, an Affiliate. Due to a HUBZone certification, the Affiliate purchases our jet fuel under a Jet Fuel Sales Agreement and bids on jet fuel contracts under preferential pricing terms. For the twelve months ended December 31, 2022 and 2021, the Affiliate accounted for approximately 35.6% and 29.9% of total revenue from operations, respectively.

See "Part II, Item 8. Financial Statements and Supplementary Data – Notes (3) and (15)" for additional disclosures related to Affiliate agreements and arrangements for additional disclosures related to Affiliate risk.

BOEM Additional Financial Assurance (Supplemental Pipeline Bonds)

To cover the various obligations of lessees and rights-of-way holders operating in federal waters of the Gulf of Mexico, BOEM evaluates an operator's financial ability to conduct present and future obligations to determine whether the operator must provide additional security beyond the statutory bonding requirements. Such obligations include the cost of plugging and abandoning wells and decommissioning pipelines and platforms at the end of production or service activities. Once plugging and abandonment work has been completed, the collateral backing the financial assurance is released by BOEM.

BDPL historically maintained $0.9 million in financial assurance to BOEM for the decommissioning of its trunk pipeline offshore in federal waters. Following an agency restructuring of the financial assurance program, in March 2018 BOEM ordered BDPL to provide additional financial assurance totaling approximately $4.8 million for five (5) existing pipeline rights-of-way. In June 2018, BOEM issued BDPL INCs for each right-of-way that failed to comply. BDPL appealed the INCs to the IBLA. Although the IBLA granted multiple extension requests, the Office of the Solicitor of the U.S. Department of the Interior indicated that BOEM would not consent to further extensions. The solicitor's office signaled that BDPL's adherence to milestones identified in an August 2019 meeting between management and BSEE may help in future discussions with BOEM related to the INCs. Decommissioning of these assets will significantly reduce or eliminate the amount of financial assurance required by BOEM, which may serve to partially or fully resolve the INCs.

BDPL's pending appeal of the BOEM INCs does not relieve BDPL of its obligations to provide additional financial assurance or of BOEM's authority to impose financial penalties. There can be no assurance that we will be able to meet additional financial assurance (supplemental pipeline bond) requirements. If BDPL is required by BOEM to provide significant additional financial assurance (supplemental pipeline bonds) or is assessed significant penalties under the INCs, we will experience a significant and material adverse effect on our operations, liquidity, and financial condition.

We are currently unable to predict the outcome of the BOEM INCs. Accordingly, we did not record a liability on our consolidated balance sheets as of December 31, 2022 and 2021. At both December 31, 2022 and 2021, BDPL maintained approximately $0.9 million in pipeline rights-of-way surety bonds issued to BOEM through RLI Corp. Of the pipeline rights-of-way bonds, $0.7 million was credit-backed and $0.2 million was cash-backed.

BSEE Offshore Pipelines and Platform Decommissioning

BDPL has pipelines and platform assets that are subject to BSEE's idle iron regulations. Idle iron regulations mandate lessees and rights-of-way holders to permanently abandon and/or remove platforms and other structures when they are no longer useful for operations. Until such structures are abandoned or removed, lessees and rights-of-way holders are required to inspect and maintain the assets in accordance with regulatory requirements.

In December 2018, BSEE issued an INC to BDPL for failing to flush and fill Pipeline Segment No. 13101. Management met with BSEE in August 2019 to address BDPL's plans with respect to decommissioning its offshore pipelines and platform assets. BSEE proposed that BDPL re-submit pipeline and platform decommissioning permit applications, including a safe boarding plan, by February 2020. BDPL submitted permit applications to BSEE in February 2020 and the USACOE in March 2020. In April 2020, BSEE issued another INC to BDPL for failing to perform the required structural surveys for the GA-288C Platform. BDPL completed the required platform surveys in June 2020.

In August 2022, BSEE issued an INC to BDPL for failing to complete decommissioning its main offshore pipeline and anchor platform. In addition, pursuant to a September 2022 letter, BSEE ordered BDPL to complete pipeline decommissioning and removal of the anchor platform by June 1, 2023. BDPL is examining the feasibility of completing decommissioning operations by BSEE's deadline. In March 2023, BSEE issued an INC to BDPL for failing to perform the required structural surveys for the GA-288C platform for 2021 and 2022, and for failing to provide BSEE with such survey results. BDPL is obtaining vendor quotes for the performance of the required surveys and intends to submit a corrective action plan to BSEE. If BDPL fails to complete decommissioning of the offshore pipeline and platform assets and/or remedy the INCs within the timeframe mandated by BSEE, BDPL could be subject to regulatory oversight and enforcement, including but not limited to failing to correct an INC, civil penalties, and revocation of BDPL's operator designation, which could have a material adverse effect on our earnings, cash flows, and liquidity.

We cannot currently estimate when decommissioning may occur or predict the outcome of the BSEE INCs. Accordingly, we did not record a liability related to potential penalties on our consolidated balance sheets as of December 31, 2022 and 2021. At December 31, 2022 and 2021, BDPL maintained $3.7 million and $3.5 million, respectively, in AROs related to abandonment of these assets, which amount does not include potential penalties.

Off-Balance Sheet Arrangements. None.

Accounting Standards.

Critical Accounting Policies and Estimates

Significant Accounting Policies. Our significant accounting policies relate to use of estimates, cash and cash equivalents, restricted cash, accounts receivable and allowance for doubtful accounts, inventory, property and equipment, leases, revenue recognition, income taxes, impairment or disposal of long-lived assets, asset retirement obligations, and computation of earnings per share.

Estimates. The nature of our business requires that we make estimates and assumptions in accordance with U.S. GAAP. These estimates and assumptions affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenue and expenses during the reporting period. Although commodity price volatility, the Russian-Ukrainian military conflict, COVID-19, recession, inflation, and severe weather resulting from climate change have impacted these estimates and assumptions, we are continually working to mitigate future risks. However, the extent to which these factors may impact our business, financial condition, liquidity, results of operations, and future prospects will depend on future developments, which cannot be predicted with any degree of certainty.

We assessed certain accounting matters that require consideration of forecasted financial information in context with information reasonably available to us as of December 31, 2022 and through the filing date of this report. The accounting matters assessed included, but not limited to, our allowance for doubtful accounts, inventory, and related reserves, and the carrying value of long-lived assets.

New Accounting Standards and Disclosures

New Pronouncements Adopted. During the twelve months ended December 31, 2022, we did not adopt any ASUs.

New Pronouncements Issued, Not Yet Effective. No new pronouncements that have been issued, but are not yet effective, are expected to have a material impact on our financial position, results of operations, or liquidity.

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ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

UHY LLP
Certified Public Accountants

To the Board of Directors and
Stockholders of Blue Dolphin Energy Company

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Blue Dolphin Energy Company and Subsidiaries (the "Company") as of December 31, 2022 and 2021, and the related consolidated statements of operations, stockholders' equity (deficit) and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Substantial Doubt about the Company's Ability to Continue as a Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note (1) to the consolidated financial statements, the Company is in default under secured and related party loan agreements and has a net working capital deficiency. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note (1). The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Related Party Transactions

As described in Note 3 to the consolidated financial statements, Lazarus Energy Holdings (LEH) is a controlling stockholder of Blue Dolphin Energy Company. In addition, there is an overlapping director and executive officer between the companies. Each of these entities has been identified as a related party at December 31, 2022. The Company has entered into a number of transactions with related parties, including but not limited to, agreements for management of the operating facility, sale of jet fuel, and various credit facilities.

We identified the evaluation of the Company's identification of related parties and related party transactions as a critical audit matter. This required a high degree of auditor judgment and subjectivity in performing procedures to evaluate the reasonableness of management's procedures performed to identify related parties and related party transactions.

Our audit procedures included, among others (i) inquiring of executive officers, key members of management, the Audit Committee of the Board of Directors, and others within the Company regarding related party relationships and transactions, (ii) receiving confirmations from related parties and compared responses to the Company's records, (iii) comparing the Company's reconciliation of applicable accounts to related parties' records of transactions and balances, (iv) reading agreements and contracts with related parties and evaluated whether authorization and approvals were obtained and the terms and other information about transactions are consistent with explanations from inquiries and other audit evidence obtained about the business purpose of the transactions, (v) reading the Company's minutes from meetings of the Board of Directors, and (vi) evaluating the completeness and accuracy of disclosures surrounding related party transactions.

/s/ UHY LLP
UHY LLP
Sterling Heights, Michigan
April 3, 2023
PCAOB Number: 01195

We have served as the Company's auditor since 2002.

Consolidated Balance Sheets

	December 31, 2022	December 31, 2021
	(in thousands except share amounts)	
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 520	$ 9
Restricted cash	-	48
Accounts receivable, net	1,148	126
Prepaid expenses and other current assets	3,466	2,433
Deposits	110	110
Inventory	19,844	3,098
Total current assets	25,088	5,824
LONG-TERM ASSETS		
Total property and equipment, net	57,436	59,923
Operating lease right-of-use assets, net	149	332
Restricted cash, noncurrent	1,001	-
Surety bonds	230	230
Total long-term assets	58,816	60,485
TOTAL ASSETS	$ 83,904	$ 66,309
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
CURRENT LIABILITIES		
Long-term debt less unamortized debt issue costs, current portion (in default)	$ 42,155	$ 42,953
Long-term debt, related party, current portion (in default)	5,211	20,042
Interest payable (in default)	6,271	8,689
Interest payable, related party (in default)	4,094	3,454
Accounts payable	2,161	2,548
Accounts payable, related party	155	155

Current portion of lease liabilities	156	215
Income taxes payable	307	-
Asset retirement obligations, current portion	3,710	-
Accrued expenses and other current liabilities	6,114	6,225
Total current liabilities	70,334	84,281
LONG-TERM LIABILITIES		
Asset retirement obligations	-	3,461
Long-term lease liabilities, net of current	-	156
Unearned contract renewal income, net of current	660	1,200
Long-term debt, net of current portion	2,322	838
Total long-term liabilities	2,982	5,655
TOTAL LIABILITIES	73,316	89,936
Commitments and contingencies (Note 15)		
STOCKHOLDERS' EQUITY (DEFICIT)		
Common stock ($0.01 par value, 20,000,000 shares authorized; 14,921,968 and 12,693,514 shares issued at December 31, 2022 and 2021, respectively)(1)	149	127
Additional paid-in capital	39,758	38,457
Accumulated deficit	(29,319)	(62,211)
TOTAL STOCKHOLDERS' EQUITY (DEFICIT)	10,588	(23,627)
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)	$ 83,904	$ 66,309

(1) Blue Dolphin has 2,500,000 shares of preferred stock, par value $0.10 per share, authorized. At both December 31, 2022 and 2021, there were no shares of preferred stock issued and outstanding.

The accompanying notes are an integral part of these consolidated financial statements.

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Financial Statements

Consolidated Statements of Operations

	Twelve Months Ended December 31,	
	2022	2021
	(in thousands, except share and per-share amounts)	
REVENUE FROM OPERATIONS		
Refinery operations	$ 483,061	$ 297,103
Tolling and terminaling	4,443	3,717
Total revenue from operations	487,504	300,820
COST OF GOODS SOLD		
Crude oil, fuel use, and chemicals	429,723	292,438
Other conversion costs	11,710	7,468
Total cost of goods sold	441,433	299,906
Gross profit	46,071	914
COST OF OPERATIONS		
LEH operating fee, related party	744	522
Other operating expenses	221	198
General and administrative expenses	2,915	3,021
Depreciation and amortization	2,798	2,780
Impairment of assets	114	1,092
Bad debt expense	62	-
Accretion of asset retirement obligations	134	-
Total cost of operations	6,988	7,613
Income (loss) from operations	39,083	(6,699)
OTHER INCOME (EXPENSE)		
Easement, interest and other income	1	2
Interest and other expense	(5,885)	(6,199)
Gain on extinguishment of debt	-	55
Total other income (expense)	(5,884)	(6,142)

Income (loss) before income taxes	33,199	(12,841)
Income tax expense	(307)	-
Net Income (loss)	$ 32,892	$ (12,841)
Income (loss) per common share:		
Basic	$ 2.34	$ (1.01)
Diluted	$ 2.34	$ (1.01)
Weighted average number of common shares outstanding:		
Basic	14,079,327	12,693,514
Diluted	14,079,327	12,693,514

The accompanying notes are an integral part of these consolidated financial statements.

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Consolidated Statements of Stockholders' Equity (Deficit)

	Common Stock				
	Shares Issued	Par Value	Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Equity (Deficit)
			(in thousands except share amounts)		
Balance at December 31 2020	**12,693,514**	**$ 127**	**$ 38,457**	**$ (49,370)**	**$ (10,786)**
Net income (loss)				(12,841)	(12,841)
Balance at December 31, 2021	**12,693,514**	**$ 127**	**$ 38,457**	**$ (62,211)**	**$ (23,627)**
Common stock issued for payment of debt	1,951,416	20	1,142	-	1,162
Common stock issued for services	277,038	2	159	-	161
Net income	-	-	-	32,892	32,892
Balance at December 31, 2022	**14,921,968**	**$ 149**	**$ 39,758**	**$ (29,319)**	**$ 10,588**

The accompanying notes are an integral part of these consolidated financial statements.

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Consolidated Statements of Cash Flows

	Twelve Months Ended December 31,	
	2022	2021
	(in thousands)	
OPERATING ACTIVITIES		
Net income (loss)	$ 32,892	$ (12,841)
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Depletion, depreciation and amortization	2,798	2,780
Accretion of asset retirement obligations	134	-
Amortization of debt issue costs	204	147
Guaranty fees paid in kind	605	608
Related-party interest expense paid in kind	598	1,116
Deferred revenues and expenses	(540)	(320)
Loss on issuance of shares	357	-
Bad debt	62	-
Impairment of assets	114	1,092
Gain on extinguishment of debt	-	(55)
Changes in operating assets and liabilities		
Accounts receivable	(1,084)	88
Prepaid expenses and other current assets	(1,033)	1,131
Deposits and other assets	-	14

Inventory		(16,746)		(2,036)
Accounts payable, accrued expenses and other liabilities		(2,089)		2,220
Net cash provided by (used in) operating activities		16,272		(6,056)
INVESTING ACTIVITIES				
Capital expenditures		(102)		-
Net cash used in investing activities		(102)		-
FINANCING ACTIVITIES				
Proceeds from debt		1,500		10,500
Payments on debt principal		(1,017)		(4,738)
Payments of debt issuance costs		-		(750)
Net activity on related-party debt		(15,189)		(10)
Net cash provided by (used in) financing activities		(14,706)		5,002
Net change in cash, cash equivalents, and restricted cash		1,464		(1,054)
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH AT BEGINNING OF PERIOD		57		1,111
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH AT END OF PERIOD	$	1,521	$	57
Supplemental Information:				
Non-cash investing and financing activities:				
Financing of line of credit via related-party debt	$	-	$	2,331
Issuance of shares for services and/or to extinguish debt	$	966	$	-
Line of credit financed by offsetting tank leases less interest	$	-	$	289
Interest paid	$	5,534	$	1,252
Income taxes paid (refunded)	$	-	$	-

The accompanying notes are an integral part of these consolidated financial statements.

Notes to Consolidated Financial Statements

Notes to Consolidated Financial Statements

(1) Organization

Company Overview

Blue Dolphin was formed in 1986 as a Delaware corporation. The company is an independent downstream energy company operating in the Gulf Coast region of the United States. Operations primarily consist of a light sweet-crude, 15,000-bpd crude distillation tower, and approximately 1.2 million bbls of petroleum storage tank capacity in Nixon, Texas. Blue Dolphin trades on the OTCQX under the ticker symbol "BDCO."

Assets are organized in two business segments: 'refinery operations' (owned by LE) and 'tolling and terminating services' (owned by LRM and NPS). 'Corporate and other' includes Blue Dolphin subsidiaries BDPL (inactive pipeline and facilities assets), BDPC (inactive leasehold interests in oil and gas wells), and BDSC (administrative services). See "Note (4)" to our consolidated financial statements for more information about our business segments.

Unless the context otherwise requires, references in this report to "we," "us," "our," or "ours," refer to Blue Dolphin, one or more of its consolidated subsidiaries or all of them taken as a whole.

An Affiliate, combined with Jonathan Carroll, controlled approximately 83% of the voting power of our Common Stock as of the filing date of this report. An Affiliate also operates and manages all Blue Dolphin properties, funds working capital requirements during periods of working capital deficits, guarantees certain of our third-party secured debt, and is a significant customer of our refined products. Blue Dolphin and certain of its subsidiaries are currently parties to a variety of agreements with Affiliates. See "Note (3)" to our consolidated financial statements for additional disclosures related to Affiliate agreements, arrangements, and risks associated with working capital deficits.

Going Concern

In accordance with GAAP accounting standards, we evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that our consolidated financial statements are issued. While results of operations were significantly improved for the twelve months ended December 31, 2022 versus the prior twelve month period, management determined that certain factors continue to present substantial doubt about our ability to continue as a going concern. These factors include significant current debt, which impacts our ability to meet debt covenants, and historical net losses and working capital deficits. Our consolidated financial statements assume we will continue as a going concern and do not include any adjustments that might result from this uncertainty. Management is working to alleviate these factors by entering into forbearance agreements with lenders, maximizing operation of the Nixon refinery given favorable refining margins, and pursuing opportunities to obtain capital and/or refinance debt.

Our significant current debt is the result of certain third-party and related-party loan agreements being classified within the current portion of long-term debt on our consolidated balance sheets at December 31, 2022 and 2021. Excluding accrued interest, we had current debt of $47.4 million and $63.0 million, respectively, as of December 31, 2022 and 2021. Our significant current debt consists of bank debt to Veritex and GNCU, investor debt to John Kissick, and related party debt to LEH.

Forbearance Agreement. Pursuant to the November 2022 Veritex Forbearance Agreement, Veritex agreed to forbear from exercising any of its rights and remedies related to existing defaults pertaining to covenant violations under the LE Term Loan Due 2034 and LRM Term Loan Due 2034 for a period beginning on November 18, 2022 through September 30, 2023. During the forbearance period, Veritex agreed to forbear from testing borrowers' compliance with financial covenants as specified in the LE Term Loan Due 2034 and LRM Term Loan Due 2034 and forbear from exercising its rights or remedies with respect to non-compliance with the financial covenants. As part of the Veritex Forbearance Agreement, LE and LRM paid Veritex: (i) $4.3 million in past due principal and interest at the non-default rate (excluding late fees), (ii) $1.0 million into a payment reserve account, and (iii) $0.04 million in Veritex attorney fees. In the event that LE and LRM pay off all amounts due under the LE Term Loan Due 2034 and LRM Term Loan Due 2034 on or before September 30, 2023, Veritex also agreed to waive late fees totaling approximately $0.4 million in the aggregate. The Veritex Forbearance Agreement shall terminate on the first to occur: September 30, 2023, failing to make a payment when due, breach, or any new event of default. As of December 31, 2022 and the filing date of this report, LE and LRM were in compliance with the Veritex Forbearance Agreement.

Other Defaults. We are in default under the NPS Term Loan Due 2031 due to covenant violations. We are also in default under the Kissick Debt, June LEH Note, and BDPL-LEH Loan agreement related to past due obligations at maturity. Defaults permit the lender to declare the amounts owed under the related loan agreements immediately due and payable, exercise their rights with respect to collateral securing obligors' obligations, and/or exercise any other rights and remedies available.

Favorable Refining Margins. The strong demand for our products, particularly jet fuel, and the increase in refining margins were the primary contributors to us reporting $32.9 million in net income for the twelve months ended December 31, 2022. Comparatively, we reported a net loss of $12.8 million for the twelve months ended December 31, 2021. Our operating results for 2022, including operating results by segment, can be found within 'Results of Operations' in "Part II, Item 7. Management's Discussion and Financial Analysis of Financial Condition and Results of Operations" in this report.

Our results of operations and liquidity are highly dependent upon the margins that we receive for our refined products. The dollar per bbl commodity price difference between crude oil and condensate (input) and refined products (output) is the most significant driver of refining margins, and they have historically been subject to wide fluctuations. While refining margins and liquidity improved significantly during 2022, the general outlook for the oil and natural gas industry for 2023 remains unclear given uncertainty surrounding the Russian military conflict with Ukraine, COVID-19, recession, and inflation. We can provide no assurances that refining margins and demand will remain at current levels.

Working Capital Improvements. Historically, we experienced net losses during three of the last five years. We had $45.2 million and $78.5 million in working capital deficits at December 31, 2022 and 2021, respectively. Excluding the current portion of long-term debt, we had $2.1 million in working capital and $15.5 million in working capital deficits at December 31, 2022 and 2021, respectively. The significant improvement in working capital between the twelve-month periods ended December 31, 2022 and 2021 was primarily due to favorable refining margins and increased gross profit. Continued favorable market conditions will enable us to continue meeting our needs through cash flow from operations. We also continue to explore opportunities to obtain capital and/or refinance debt. During the twelve months ended December 31, 2022 and 2021, we successfully secured $1.5 million and $10.5 million, respectively, in working capital through CARES Act loans. In October 2021, NPS repaid all obligations owed to Pilot under the Amended Pilot Line of Credit.

Our ability to continue as a going concern depends on sustained positive operating margins and adequate working capital for, amongst other requirements, purchasing crude oil and condensate and making payments on long-term debt. If we are unable to process crude oil and condensate into sellable refined products or make required debt payments, we may consider other options. These options could include selling assets, raising additional debt or equity capital, cutting costs, reducing cash requirements, restructuring debt obligations, or filing bankruptcy.

Operating Risks

Successful execution of our business strategy depends on several critical factors, including having adequate working capital, favorable refining margins, and maintaining operation of the Nixon refinery.

- Working Capital – As noted above, we have historically had working capital deficits primarily due to having significant current debt. Having sufficient working capital is necessary to meet contractual, operational, regulatory, and safety needs. Our short-term working capital needs are primarily related to: (i) purchasing crude oil and condensate to operate the Nixon refinery, (ii) reimbursing LEH for direct operating expenses and paying the LEH operating fee under the Amended and Restated Operating Agreement, (iii) servicing debt, (iv) maintaining and improving the Nixon facility through capital expenditures, and (v) meeting regulatory compliance requirements. Our long-term working capital needs are primarily related to repayment of long-term debt obligations. To avoid business disruptions and manage cash flow, we optimize receivables and payables by prioritizing payments, optimize inventory levels based on demand, monitor discretionary spending, and carefully manage capital expenditures.
- Refining Margins – Refining margins, which are affected by commodity prices and refined product demand, are volatile, and a reduction in refining margins will adversely affect the amount of cash we will have available for working capital. Crude oil refining is primarily a margin-based business. To improve margins, we must maximize yields of higher value finished petroleum products and minimize costs of feedstocks and operating expenses. When the spread between these commodity prices decreases, our margins are negatively affected. Although an increase or decrease in the commodity price for crude oil and other feedstocks generally results in a similar increase or decrease in commodity prices for finished petroleum products, typically there is a time lag between the two. The effect of crude oil commodity price changes on our finished petroleum product commodity prices therefore depends, in part, on how quickly and how fully the market adjusts to reflect these changes. Unfavorable margins may have a material adverse effect on our earnings, cash flows, and liquidity. To remain competitive in a volatile commodity price environment, we adjust throughput and production based on market conditions and adjust our product slate based on commodities pricing.
- Nixon Refinery Operation – We maintain relationships with suppliers that source and repair key components of the Nixon refinery. We expect our suppliers to maintain an adequate supply of component products and, when components are sent out for repair, to timely deliver components. However, in some cases, increases in demand or supply chain disruptions have led to part and component constraints. We use several suppliers and monitor supplier financial viability to mitigate supply-based risks that could cause a business disruption.

The Russian military conflict with Ukraine, COVID-19, recession, and inflation continue to evolve, and the extent to which these factors may impact working capital, commodity prices, refined product demand, our supply chain, financial condition, liquidity, results of operations, and future prospects will depend on future developments, which cannot be predicted with any degree of confidence. We can provide no guarantees that: our business strategy will be successful, Affiliates will continue to fund our working capital needs when we experience working capital deficits, we will meet regulatory requirements to provide additional financial assurance (supplemental pipeline bonds) and decommission offshore pipelines and platform assets, we can obtain additional financing on commercially reasonable terms or at all, or margins on our refined products will be favorable. Further, if third parties exercise their rights and remedies under secured loan agreements that are in default, or if Tartan terminates the Crude Supply Agreement, our business, financial condition, and results of operations will be materially adversely affected.

(2) ***Principles of Consolidation and Significant Accounting Policies***

Basis of Presentation

The accompanying consolidated financial statements, which include Blue Dolphin and its subsidiaries, have been prepared in accordance with U.S. generally accepted accounting principles and the rules and regulations of the SEC. These rules and regulations conform to the accounting principles contained in FASB's ASC, the single source of GAAP. All significant intercompany items have been eliminated in consolidation. Additionally, any material subsequent events that occurred after the date through which this report covers have been properly recognized or disclosed in our financial statements. In management's opinion, all adjustments considered necessary for a fair presentation have been included, disclosures are adequate, and the presented information is not misleading.

Significant Accounting Policies

The summary of significant accounting policies of Blue Dolphin is presented to assist in understanding our consolidated financial statements. Our consolidated financial statements and accompanying notes are representations of management, who is responsible for their integrity and objectivity. These accounting policies conform to GAAP and have been consistently applied in the preparation of our consolidated financial statements.

Use of Estimates. The nature of our business requires that we make estimates and assumptions in accordance with U.S. GAAP. These estimates and assumptions affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenue and expenses during the reporting period. Although commodity price volatility, the Russian-Ukrainian military conflict, COVID-19, recession, inflation, and severe weather resulting from climate change have impacted these estimates and assumptions, we are continually working to mitigate future risks. However, the extent to which these factors may impact our business, financial condition, liquidity, results of operations, and future prospects will depend on future developments, which cannot be predicted with any degree of certainty.

We assessed certain accounting matters that require consideration of forecasted financial information in context with information reasonably available to us as of December 31, 2022 and through the filing date of this report. The accounting matters assessed included, but not limited to, our allowance for doubtful accounts, inventory, and related reserves, and the carrying value of long-lived assets.

Cash, Cash Equivalents, and Restricted Cash. Cash and cash equivalents represent liquid investments with an original maturity of three months or less. Cash balances are maintained in depository and overnight investment accounts with financial institutions that, at times, may exceed insured deposit limits. Management has deemed this a normal business risk. We monitor the financial condition of the financial institutions and have experienced no losses associated with these accounts. Restricted cash, non-current portion at December 31, 2022 and current portion at December 31, 2021 reflects amounts held in a payment reserve account by Veritex as security for payments under the LE Term Loan Due 2034.

The following table provides a reconciliation of cash, cash equivalents, and restricted cash as reported in the consolidated statements of cash flows:

	December 31,			
	2022		2021	
	(in thousands)			
Cash and cash equivalents	$	**520**	$	9
Restricted cash		**-**		48
Restricted cash, noncurrent		**1,001**		-
	$	**1,521**	$	57

Accounts Receivable and Allowance for Doubtful Accounts. Accounts receivable are presented net of any necessary allowance(s) for doubtful accounts. Receivables are recorded at the invoiced amount and generally do not bear interest. An allowance for doubtful accounts is established, when necessary, based on prior experience and other factors which, in management's judgment, deserve consideration in estimating bad debts. Management assesses collectability of the customer's account based on current aging status, collection history, and financial condition. Based on a review of these factors, management establishes or adjusts the allowance for specific customers and the entire accounts receivable portfolio. We had an allowance for doubtful accounts of $0.06 million and $0 at December 31, 2022 and 2021.

Financial Instruments. Our financial instruments are comprised of cash and cash equivalents, accounts receivable, accounts payable, and long-term debt. The carrying value of cash and cash equivalents, accounts receivable, and accounts payable approximate fair value due to their short maturities. The carrying value of long-term debt approximates fair value as it carries interest rates that fluctuate with the prime rate.

Inventory. Inventory primarily consists of refined products, crude oil and condensate, and chemicals. Inventory is valued at the lower of cost or net realizable value with cost determined by the average cost method, and net realizable value determined based on estimated selling prices less associated delivery costs. If the net realizable value of our refined products inventory declines to an amount less than our average cost, we record a write-down of inventory and an associated adjustment to cost of goods sold. See "Note (7)" to our consolidated financial statements for additional disclosures related to inventory.

Property and Equipment.

Refinery and Facilities. We typically make ongoing improvements to the Nixon facility based on operational needs, technological advances, and safety and regulatory requirements. We capitalize additions to refinery and facilities assets, and we expense costs for repairs and maintenance as incurred. We record refinery and facilities at cost less any adjustments for depreciation or impairment. We adjust the asset and the related accumulated depreciation accounts for the refinery and facilities asset's retirement and disposal, with the resulting gain or loss included in the consolidated statements of operations. For financial reporting purposes, we compute refinery and facilities assets depreciation using the straight-line method with an estimated useful life of 25 years; we depreciate refinery and facilities assets when placed in service. We did not record any impairment of our refinery and facilities assets for the periods presented.

Pipelines and Facilities. We record our pipelines and facilities at cost less any adjustments for depreciation or impairment. We computed depreciation using the straight-line method over estimated useful lives ranging from 10 to 22 years. Per FASB ASC guidance, we performed impairment testing of our pipeline and facilities assets in 2016. Upon completion of testing, we fully impaired our pipeline assets at December 31, 2016. During the twelve months ended December 31, 2021, we recorded an additional impairment of $1.1 million due to a change in the estimated future cost and timing of decommissioning these assets. During the twelve months ended December 31, 2022, we recorded an additional impairment of $0.1 million due to an additional change in the timing of decommissioning these assets. Our pipelines and facilities assets are inactive. Decommissioning of these assets was delayed due to cash constraints associated with historical net losses and the impact of COVID-19. BSEE mandated that decommissioning occur prior to June 1, 2023. BDPL is examining the feasibility of completing decommissioning operations by BSEE's deadline.

Oil and Gas Properties. Our oil and gas properties are accounted for using the full-cost method of accounting, whereby all costs associated with acquisition, exploration and development of oil and gas properties, including directly related internal costs, are capitalized on a cost center basis. Amortization of such costs and estimated future development costs are determined using the unit-of-production method. All leases associated with our oil and gas properties have expired, and our oil and gas properties have been fully impaired since 2011.

CIP. CIP expenditures, including capitalized interest, relate to construction and refurbishment activities and equipment for the Nixon facility. These expenditures are capitalized as incurred. Depreciation begins once the asset is placed in service. See "Note (8)" to our consolidated financial statements for additional disclosures related to refinery and facilities assets, oil and gas properties, pipelines and facilities assets, and CIP.

Leases. We determine whether a contract or agreement is or contains a lease at inception. If the contract is or includes a lease and has a term greater than one year, we recognize a ROU asset and lease liability as of the commencement date based on the present value of the lease payments over the lease term. We determine the present value of the lease payments by using the implicit rate when readily determinable. If the implicit rate is not defined, we use the incremental borrowing rate to discount lease payments to present value. We adjust lease terms to include options to extend or terminate the lease when it is reasonably certain that we will exercise those options.

For operating leases, we record lease cost on a straight-line basis over the lease term; we record lease expenses in the appropriate line on the income statement based on the leased asset's intended use. For finance leases (previously referred to under GAAP as capital leases), we amortize lease payments for the ROU asset on a straight-line basis over the lesser of the leased asset's useful life or the lease term; we record amortization expenses on the income statement in 'depreciation and amortization expense;' we record interest expense on the income statement in 'interest and other expense.'

Revenue Recognition.
Refinery Operations Revenue. We recognize revenue from refined products sales when we meet our performance obligation to the customer. We meet our performance obligation when the customer receives control of the product. The customer accepts control of the product when the product is lifted. Under bill and hold arrangements, the customer takes control of the product when added to the customer's bulk inventory as stored at the Nixon facility. We allocate a transaction price to each separately identifiable refined product load.

We consider a variety of facts and circumstances in assessing the point of a control transfer, including but not limited to: whether the purchaser can direct the use of the refined product, the transfer of significant risks and rewards, our rights to payment, and transfer of legal title. In each case, the term between the sale and when payment is due is not significant. We include incurred transportation, shipping, and handling costs in the cost of goods sold. We do not include excise and other taxes collected from customers and remitted to governmental authorities in revenue.

Tolling and Terminaling Revenue. Tolling and terminaling revenue represents fees under (i) storage tank agreements, whereby a customer agrees to pay a certain fee per storage tank based on tank size over time for the storage of products and (ii) tolling agreements, whereby a customer agrees to pay a certain fee per gallon or barrel for throughput volumes moving through the naphtha stabilizer unit and a fixed monthly reservation fee for the use of the naphtha stabilizer unit.

We typically satisfy performance obligations for tolling and terminaling operations over time. We determine the transaction price at agreement inception based on the guaranteed minimum amount of revenue over the agreement term. We allocate the transaction price to the single performance obligation that exists under the agreement. We recognize revenue in the amount for which we have a right to invoice. Generally, payment terms do not exceed 30 days.

Revenue from storage tank customers may, from time to time, include fees for ancillary services, such as in-tank and tank-to-tank blending. These services are considered optional to the customer. The fixed cost under the customer's storage tank agreement does not include ancillary services fees. We consider ancillary services as a separate performance obligation under the storage tank agreement. We satisfy the performance obligation and recognize the associated fee when we complete the requested service.

Deferred Revenue. Deferred revenue represents a liability related to a revenue-producing activity as of the balance sheet date. We record unearned revenue, which usually consists of customer prepayments when we receive the cash payment. Once we satisfy the performance obligation, we recognize revenue in conformity with GAAP.

Unearned Contract Renewal Income. We recognize deferred revenue from suppliers for upfront payments received but not yet earned as a reduction of cost of sales on a straight-line basis over the term of the supply contract.

Income Taxes. Income tax expense includes federal and state taxes currently payable and deferred taxes arising from temporary differences between income for financial reporting and income tax purposes.

Income taxes are calculated utilizing the applicable rates on items included in the determination of income for income tax purposes. Our effective tax rate may be different than what would be expected if the federal and state statutory rates were applied to income from continuing operations primarily because of amounts expensed for financial reporting that are not deductible for tax purposes.

The benefit of an uncertain tax position is recognized in the financial statements if it meets a minimum recognition threshold. A determination is first made as to whether it is more likely than not that the income tax position will be sustained, based upon technical merits, upon examination by the taxing authorities. If the income tax position is expected to meet the more-likely-than-not criteria, the benefit recorded in the financial statements equals the largest amount that is greater than 50% likely to be realized upon its ultimate settlement. At December 31, 2022 and 2021, there were no uncertain tax positions for which a reserve or liability is necessary.

Deferred Taxes. Deferred income tax assets and liabilities are recorded for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and its respective tax basis. Deferred income tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be realized. The effect on deferred income tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. Deferred income tax assets are reduced by a valuation allowance when we are unable to conclude that realization of the deferred income tax assets is more likely than not.

Impairment or Disposal of Long-Lived Assets. We periodically evaluate our long-lived assets for impairment. Additionally, we reassess our long-lived assets when events or circumstances indicate that the carrying value of these assets may not be recoverable. The carrying value is not recoverable if it exceeds the sum of the undiscounted cash flows expected from the use and eventual disposition of the asset or group of assets. If the carrying value exceeds the sum of the undiscounted cash flows, an impairment loss equal to the amount by which the carrying value exceeds the fair value of the asset or group of assets is recognized. Management uses significant judgment in forecasting future operating results and projected cash flows. If conditions or assumptions change, material impairment charges could be necessary.

Commodity price market volatility associated with the Russian military conflict with Ukraine, recession, inflation, and COVID-19 could affect the value of certain of our long-lived assets. Management evaluated refinery and facilities assets for impairment as of December 31, 2022. We did not record any impairment of our long-lived assets for the periods presented. However, impairment may be required in the future if losses are material, or as new opportunities arise, such as reconfiguration of the Nixon refinery into a renewable fuels facility.

Asset Retirement Obligations. We record a liability for the discounted fair value of an ARO in the period incurred. We also capitalize the corresponding cost by increasing the carrying amount of the related long-lived asset. The liability is accreted towards its future value each period, and we depreciate the capitalized cost over the useful life of the related asset. We recognize a gain or loss if we settle the liability for an amount other than the amount recorded.

Refinery and Facilities. We believe we have no legal or contractual obligation to dismantle or remove the refinery and facilities assets. Further, we believe that these assets have indeterminate lives because we cannot reasonably estimate the dates or ranges of dates upon which we would retire these assets. Management will record an asset retirement obligation for these assets when a definitive obligation arises, and retirement dates are evident.

Pipeline and Facilities; Oil and Gas Properties. Management uses significant judgment to estimate future asset retirement costs for our pipelines, related facilities, and oil and gas properties. These costs relate to dismantling and disposing certain physical assets, plugging and abandoning wells, and restoring land and sea beds. Factors considered include regulatory requirements, structural integrity, water depth, reservoir depth, equipment availability, and mobilization efforts. We review our assumptions and estimates of future abandonment costs on an annual basis. See "Note (11)" to our consolidated financial statements for additional information related to AROs.

Computation of Earnings Per Share. We present basic and diluted EPS. Basic EPS excludes dilution and is computed by dividing net income available to common stockholders by the weighted average number of shares of common stock outstanding for the period. We calculate diluted EPS by dividing net income available to common stockholders by the diluted weighted average number of common shares outstanding. Diluted EPS includes the potential dilution that could occur if securities or other contracts to issue shares of common stock were converted to common stock that then shared in the entity's earnings. We do not currently have issued options, warrants, or similar instruments. Convertible shares, if granted, are not included in the computation of earnings per share if anti-dilutive. See "Note (14)" to our consolidated financial statements for additional information related to EPS.

New Pronouncements Adopted. During the twelve months ended December 31, 2022, we did not adopt any ASUs.

New Pronouncements Issued, Not Yet Effective. No new pronouncements that have been issued, but are not yet effective, are expected to have a material impact on our financial position, results of operations, or liquidity.

(3) Related-Party Transactions

Affiliate Financial and Operational Agreements

Blue Dolphin and certain of its subsidiaries are parties to several financial and operational agreements with Affiliates. Management believes that these related-party agreements are arm's-length transactions.

Agreement/Transaction	Parties	Effective Date	Key Terms
Jet Fuel Sales Agreement[1]	LEH LE	04/01/2022	1-year term expiring earliest to occur of 03/31/2024 plus 30-day carryover or delivery of maximum jet fuel quantity; LEH bids on jet fuel contracts under preferential pricing terms due to a HUBZone certification
Office Sub-Lease Agreement	LEH BDSC	01/01/2018	68-month term expiring 08/31/2023; office lease Houston, Texas; includes 6-month rent abatement period; rent approximately $0.01 million per month
Amended and Restated Operating Agreement[2]	LEH Blue Dolphin LE LRM NPS BDPL BDPC BDSC	04/01/2020	1-year term; expires 04/01/2024 or notice by either party at any time of material breach or 90 days Board notice; LEH receives management fee of 5% of all consolidated operating costs, excluding crude costs, depreciation, amortization, and interest, of Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and BDSC
LE Amended and Restated Guaranty Fee Agreement[3]	LE Jonathan Carroll	04/01/2017	Related to payoff of LE $25.0 million Veritex loan; Jonathan Carroll receives fee equal to 2.00% per annum of outstanding principal balance owed under LE Term Loan Due 2034
LRM Amended and Restated Guaranty Fee Agreement[3]	LRM Jonathan Carroll	04/01/2017	Related to payoff of LRM $10.0 million Veritex loan; Jonathan Carroll receives fee equal to 2.00% per annum of outstanding principal balance owed under LRM Term Loan Due 2034

(1) See "Note (16)" for additional disclosures related to renewal of the Jet Fuel Sales Agreement; renewed at substantially similar terms.
(2) See "Note (16)" for additional disclosures related to renewal of the Amended and Restated Operating Agreement; renewed for one-year term; all other terms substantially similar.
(3) Jonathan Carroll was required to personally guarantee repayment of borrowed funds and accrued interest. See "Note (16)" for disclosures related to modification of the LE Amended and Restated Guaranty Fee Agreement and LRM Amended and Restated Guaranty Fee Agreement; as modified, Jonathan Carroll receives fee payable 100% in cash instead of 50% in stock and 50% in cash.

See "Note (16)" for additional disclosures related to new related-party agreements approved subsequent to December 31, 2022.

Working Capital

We historically relied on Affiliates for funding during periods of working capital deficits. We reflect such borrowings in our consolidated balance sheets in accounts payable, related party, or long-term debt, related party. During the twelve months ended December 31, 2022, continued liquidity improvement related to favorable market conditions enabled us to increasingly meet our needs through cash flow from operations.

Affiliate Long-Term Debt

Blue Dolphin and certain of its subsidiaries are parties to the following debt agreements with Affiliates:

Loan Description	Parties	Maturity Date	Interest Rate	Loan Purpose
June LEH Note *(in default)*	LEH	Jan 2019	8.00%	Blue Dolphin working capital; reflects amounts

	Blue Dolphin			owed to LEH under the Second Amended and Restated Operating Agreement
BDPL-LEH Loan Agreement *(in default)*	LEH BDPL	Aug 2018	16.00%	Original principal amount of $4.0 million; Blue Dolphin working capital

Pursuant to the Assignment Agreement, the March Ingleside Note and March Carroll Note were assigned to LEH under the June LEH Note effective December 31, 2022. See "Note (16) Subsequent Events" for additional disclosures related to related-party debt. See "Notes (1) and (10)" to our consolidated financial statements for additional information regarding defaults under our secured loan agreements and their potential effects on our business, financial condition, and results of operations.

Guarantees, Security, and Defaults

Loan Description	Guarantees	Security	Event(s) of Default
June LEH Note *(in default)*	---	---	Failure to pay past due obligations at maturity (loan matured January 2019)
BDPL-LEH Loan Agreement *(in default)*	---	Certain BDPL property	Failure to pay past due obligations at maturity (loan matured August 2018)

Covenants

The BDPL-LEH Loan Agreement contains representations and warranties, affirmative and negative covenants, and events of default that we consider usual and customary for a credit facility of this type. There are no covenants associated with the June LEH Note.

Related-Party Financial Impact

Consolidated Balance Sheets.

Accounts payable, related party. Accounts payable, related party reflects a one-time purchase of refinery equipment from LTRI. Accounts payable, related party totaled $0.2 million at both December 31, 2022 and 2021.

Long-term debt, related party, current portion (in default) and accrued interest payable, related party.

	December 31, 2022	December 31, 2021
	(in thousands)	
LEH		
June LEH Note (in default)	**$ 1,211**	$ 12,672
BDPL-LEH Loan Agreement (in default)	**8,094**	7,454
LEH Total	**9,305**	20,126
Ingleside		
March Ingleside Note	**-**	1,066
Jonathan Carroll		
March Carroll Note	**-**	2,304
	9,305	23,496
Less: Long-term debt, related party, current portion (in default)	**(5,211)**	(20,042)
Less: Accrued interest payable, related party (in default)	**(4,094)**	(3,454)
	$ -	$ -

	June LEH Note (in default)
	(in thousands)
Balance at December 31, 2021	$ 12,672
Related-party receivables settled against related-party provided working capital	(21,076)
Blue Dolphin operating costs and related LEH management fee under Amended and Restated Operating Agreement	9,615
Balance at December 31, 2022	**$ 1,211**

The amount owed under the June LEH Note reflects amounts net settled against related-party accounts receivable derived from the Jet Fuel Sales Agreement and the Amended and Restated Operating Agreement, as well as long-term debt.

Consolidated Statements of Operations.

Total revenue from operations.

	Twelve Months Ended December 31,			
	2022		2021	
	(in thousands, except percent amounts)			
Refinery operations				
LEH	**$ 173,646**	**35.6%**	$ 90,062	29.9%
Third-Parties	**309,415**	**63.5%**	207,041	68.8%
Tolling and terminaling				
LEH	**360**	**0.1%**	-	-
Third-Parties	**4,083**	**0.8%**	3,717	1.2%
	$ 487,504	**100.0%**	$ 300,820	100.0%

Interest expense.

	Twelve Months Ended December 31,	
	2022	2021
	(in thousands)	
Jonathan Carroll		
Guaranty Fee Agreements		
First Term Loan Due 2034 *(in default)*	**$ 428**	$ 430
Second Term Loan Due 2034 *(in default)*	**177**	178
March Carroll Note	**146**	132
LEH		
BDPL-LEH Loan Agreement (in default)	**480**	640
June LEH Note *(in default)*	**383**	928
Ingleside		
March Ingleside Note	**69**	56
	$ 1,683	$ 2,364

Other. BDSC received sublease income from LEH totaling $0.03 million for both twelve-month periods ended December 31, 2022 and 2021. The LEH operating fee, related party was $0.7 million for the twelve-month period ended December 31, 2022 compared to $0.5 million for the twelve-month period ended December 31, 2021. The increase between the comparative periods coincided with increased cost of goods sold during the same periods.

(4) Revenue and Segment Information

We have two reportable business segments: (i) refinery operations, which derives revenue from refined product sales, and (ii) tolling and terminaling, which derives revenue from storage tank rental fees, ancillary services fees (such as for in-tank blending), and tolling and reservation fees for use of the naphtha stabilizer at the Nixon refinery. 'Corporate and other' as presented in the segment information includes BDSC, BDPL, and BDPC.

Revenue from Contracts with Customers

Disaggregation of Revenue. We present revenue in the table below under 'Segment Information' separated by business segment because management believes this presentation is beneficial to users of our financial information.

Receivables from Contracts with Customers. We present accounts receivable from contracts with customers as accounts receivable, net on our consolidated balance sheets.

Contract Liabilities. Our contract liabilities consist of unearned revenue from customers in the form of prepayments. We include unearned revenue in accrued expenses and other current liabilities on our consolidated balance sheets. See "Note (9)" to our consolidated financial statements for more information related to unearned revenue.

Remaining Performance Obligations. Most of our customer contracts are settled immediately and therefore have no remaining performance obligations.

Contract Balances.

	December 31,	
	2022	2021
Accounts receivable (including related-party), beginning of year	$ 126	$ 214
Accounts receivable (including related-party), end of year	1,148	126
Unearned revenue, beginning of year	$ 4,388	$ 3,421
Unearned revenue, end of year	3,888	4,388

Segment Information. Business segment information for the periods indicated (and as of the dates indicated) was as follows:

Twelve Months Ended December 31,	
2022	2021
(in thousands)	

Refinery operations	**$ 483,061**	$ 297,103
Tolling and terminating	**4,443**	3,717
Total revenue from operations	**487,504**	300,820
Intercompany processing fees[1]		
Refinery operations	**(2,583)**	(2,457)
Tolling and terminating	**2,583**	2,457
Total intercompany processing fees	**-**	-
Operation costs and expenses[2]		
Refinery operations	**(439,292)**	(298,082)
Tolling and terminating	**(2,142)**	(1,825)
Corporate and other	**(221)**	(197)
Total operation costs and expenses	**(441,655)**	(300,104)
Segment contribution margin (deficit)		
Refinery operations	**41,186**	(3,436)
Tolling and terminating[3]	**4,884**	4,349
Corporate and other	**(221)**	(197)
Total segment contribution margin (deficit)	**45,849**	716
General and administrative expenses[4]		
Refinery operations	**(1,682)**	(1,549)
Tolling and terminating	**(427)**	(343)
Corporate and other	**(1,860)**	(2,742)
Total general and administrative expenses	**(3,969)**	(4,634)
Depreciation and amortization		
Refinery operations	**(1,224)**	(1,214)
Tolling and terminating	**(1,368)**	(1,362)
Corporate and other	**(206)**	(204)
Total depreciation and amortization	**(2,798)**	(2,780)
Interest and other non-operating expenses, net[5]		
Refinery operations	**(2,753)**	(2,779)
Tolling and terminating	**(1,433)**	(1,649)
Corporate and other	**(1,697)**	(1,715)
Total interest and other non-operating expenses, net	**(5,883)**	(6,143)
Income (loss) before income taxes		
Refinery operations	**35,527**	(8,978)
Tolling and terminating	**1,656**	995
Corporate and other	**(3,984)**	(4,858)
Total income (loss) before income taxes	**33,199**	(12,841)
Income tax expense	**(307)**	-
Net income (loss)	**$ 32,892**	$ (12,841)

(1) Fees associated with an intercompany tolling agreement related to naphtha volumes.

(2) Operation costs include cost of goods sold. Also, operation costs within: (a) tolling and terminaling includes terminal operating expenses and an allocation of other costs (e.g., insurance and maintenance) and (b) corporate and other includes expenses related to BDSC, BDPC and BDPL.

(3) Tolling and terminaling segment contribution margin is based on fees associated with an intercompany tolling agreement related to naphtha volumes.

(4) General and administrative expenses within refinery operations include the LEH operating fee, impairment expense, and bad debt expense.

(5) Corporate and other within interest and other non-operating expenses, net primarily reflects interest expense for the LE Amended and Restated Guaranty Fee Agreement, LRM Amended and Restated Guaranty Fee Agreement, June LEH Note, March Carroll Note, and March Ingleside Note. See “Note (3)” and “Note (15)” to our consolidated financial statements for additional information regarding guaranty fee agreements.

	Twelve Months Ended December 31, 2022	Twelve Months Ended December 31, 2021
	(in thousands)	
Capital expenditures		
Refinery operations	**$ 102**	$ -
Tolling and terminating	**-**	-
Corporate and other	**-**	-

Total capital expenditures	$ **102**	$ -

	December 31, 2022	2021
	(in thousands)	
Identifiable assets		
Refinery operations	$ **64,359**	$ 47,047
Tolling and terminating	**17,836**	17,594
Corporate and other	**1,709**	1,668
Total identifiable assets	$ **83,904**	$ 66,309

(5) Concentration of Risk

Bank Accounts

Financial instruments that potentially subject us to concentrations of risk consist primarily of cash, trade receivables and payables. We maintain cash balances at financial institutions in Houston, Texas. The FDIC insures certain financial products up to a maximum of $250,000 per depositor. At December 31, 2022 and 2021, our cash balances (including restricted cash) exceeded the FDIC insurance limit per depositor by $0.9 million and $0, respectively.

Key Supplier

Operation of the Nixon refinery depends on our ability to purchase adequate amounts of crude oil and condensate. We have a long-term crude supply agreement in place with Tartan. The volume-based Crude Supply Agreement expires when we receive 24.8 million net bbls of crude oil. After that, the Crude Supply Agreement automatically renews for successive one-year terms (each such term, a renewal term). Tartan must provide notice of non-renewal at least 60 days before the expiration of any renewal term. For the twelve months ended December 31, 2022 and 2021, we received approximately 4.5 million bbls, or 18.4%, and 4.2 million bbls, or 17.0%, respectively, of the contracted volume under the Crude Supply Agreement. As of December 31, 2022, we received approximately 13.6 million bbls, or 54.8%, of the total allowable contracted volume under the Crude Supply Agreement. At December 31, 2022, accounts payable for crude oil and condensate was $0. As of December 31, 2022, 100% of our crude oil was sourced from Tartan under the Crude Supply Agreement.

Related to the Crude Supply Agreement, Tartan stores crude oil at the Nixon facility under a terminal services agreement dated as of June 1, 2019. Under the terminal services agreement, crude oil is stored at the Nixon facility at a specified rate per bbl of the storage tank's shell capacity. The terminal services agreement renews on a one-year evergreen basis. Tartan must provide notice of non-renewal at least 60 days before the expiration of any renewal term. However, the terminal services agreement will automatically terminate upon expiration or termination of the Crude Supply Agreement.

Our financial health has been materially and adversely affected by significant current debt, certain of which is in default, historical net losses and working capital deficits, and margin volatility. If Tartan terminates the Crude Supply Agreement or terminal services agreement, our ability to acquire crude oil and condensate could be adversely affected. If producers experience crude supply constraints and increased transportation costs, our crude acquisition costs may rise, or we may not receive sufficient amounts to meet our needs, which would result in refinery downtime and could materially affect our business, financial condition, and results of operations. To mitigate this risk, we are exploring other crude supply sources.

Significant Customers

We routinely assess the financial strength of our customers. To date, we have not experienced significant write-downs in accounts receivable balances. We believe that our accounts receivable credit risk exposure is limited.

Twelve Months Ended	Number Significant Customers	% Total Revenue from Operations	Portion of Accounts Receivable at December 31,
December 31, 2022	**2**	**60.4%**	**$ 0**
December 31, 2021	3	71.9%	$ 0

One of our significant customers is LEH, an Affiliate. Due to a HUBZone certification, the Affiliate purchases our jet fuel under a Jet Fuel Sales Agreement and bids on jet fuel contracts under preferential pricing terms. For the twelve months ended December 31, 2022 and 2021, the Affiliate accounted for approximately 35.6% and 29.9% of total revenue from operations, respectively.

Concentration of Customers. Our customer base consists of refined petroleum product wholesalers. Economic changes similarly affect our customers positively or negatively, which impacts our overall exposure to credit risk. Economic changes include the uncertainties related to the Russian military conflict with Ukraine, COVID-19, recession, inflation, and the associated volatility in the global commodities markets. Historically, we have had no significant problems collecting our accounts receivable.

Refined Product Sales. We sell our products primarily in the U.S. within PADD 3. Occasionally we sell refined products to customers that export to other countries, such as low sulfur diesel to Mexico. Total refined product sales by distillation (from light to heavy) for the periods indicated consisted of the following:

	Twelve Months Ended December 31, 2022		2021	
	(in thousands, except percent amounts)			
LPG mix	$ **122**	**0.0%**	$ 21	0.0%
Naphtha	**99,946**	**20.7%**	74,683	25.2%
Jet fuel	**173,646**	**35.9%**	90,062	30.3%
HOBM	**88,472**	**18.3%**	65,386	22.0%
AGO	**120,875**	**25.1%**	66,951	22.5%
	$ **483,061**	**100.0%**	$ 297,103	100.0%

An Affiliate, LEH, purchases all of our jet fuel. See "Notes (3) and (15)" to our consolidated financial statements for additional disclosures related to Affiliate agreements and arrangements.

(6) Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets as of the dates indicated consisted of the following:

	December 31,	
	2022	2021
	(in thousands)	
Prepaid crude oil and condensate	**$ 2,183**	$ 1,368
Prepaid insurance	**1,066**	953
Other prepaids	**163**	36
Prepaid easement renewal fees	**54**	76
	$ 3,466	$ 2,433

(7) Inventory

Inventory as of the dates indicated consisted of the following:

	December 31,	
	2022	2021
	(in thousands)	
HOBM	**$ 14,879**	$ 1,749
Crude oil and condensate	**3,458**	660
Naphtha	**1,056**	189
AGO	**301**	338
Chemicals	**116**	121
Propane	**27**	27
LPG mix	**7**	14
	$ 19,844	$ 3,098

(8) Property, Plant and Equipment, Net

Property, plant and equipment, net, as of the dates indicated consisted of the following:

	December 31,	
	2022	2021
	(in thousands)	
Refinery and facilities	**$ 72,675**	$ 72,583
Land	**566**	566
Other property and equipment	**913**	903
	74,154	74,052
Less: Accumulated depreciation and amortiation	**(20,387)**	(17,795)
	53,767	56,257
CIP	**3,669**	3,666
	$ 57,436	$ 59,923

(9) Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities as of the dates indicated consisted of the following:

	December 31,	
	2022	2021
	(in thousands)	
Unearned revenue from contracts with customers	**$ 3,888**	$ 4,388
Insurance	**568**	273
Unearned contract renewal income	**480**	400
Accrued fines and penalties	**407**	407
Other payable	**324**	218
Board of director fees payable	**210**	230
Customer deposits	**173**	173
Taxes payable	**64**	136
	$ 6,114	$ 6,225

(10) Third-Party Long-Term Debt

Loan Agreements Summary

Loan Description	Parties	Principal (in millions)	Origination / Maturity	Monthly Principal and Interest Payment	Interest Rate	Loan Purpose
Veritex Loans						
LE Term Loan Due 2034 (*in default*) [1]	LE Veritex	$25.0	Jun 2015/ Jun 2034	$0.2 million	WSJ Prime + 2.75%	Refinance loan; capital improvements
LRM Term Loan Due 2034 (*in default*) [1]	LRM Veritex	$10.0	Dec 2015/ Dec 2034	$0.1 million	WSJ Prime + 2.75%	Refinance bridge loan; capital improvements
Kissick Debt (*in default*)[2][3]	LE Kissick	$11.7	June 2006/ Jan 2018	No payments to date; payment rights subordinated	16.00%	Working capital; reduced GEL obligation
GNCU Loan (*in default*)						
NPS Term Loan Due 2031[4]	NPS GNCU	$10.0	Oct 2021/ Oct 2031	$0.1 million	5.75%	Working capital
SBA EIDLs						
BDEC Term Loan Due 2051 (as modified)[5]	Blue Dolphin SBA	$2.0	May 2021/ Jun 2051	$0.01 million	3.75%	Working capital
LE Term Loan Due 2050[6]	LE SBA	$0.15	Aug 2020/ Aug 2050	$0.0007 million	3.75%	Working capital
NPS Term Loan Due 2050[6]	NPS SBA	$0.15	Aug 2020/ Aug 2050	$0.0007 million	3.75%	Working capital
Equipment Loan Due 2025[7]	LE Texas First	$0.07	Oct 2020/ Oct 2025	$0.0013 million	4.50%	Equipment Lease Conversion

(1) At December 31, 2022 and 2021, restricted cash, noncurrent was $1.0 million and $0, respectively; restricted cash, noncurrent represents amounts held by Veritex in a payment reserve account.

(2) Original principal amount was $8.0 million; debt currently held by John Kissick. Pursuant to a 2017 sixth amendment, principal under the Kissick Debt increased by $3.7 million.

(3) Under a 2015 subordination agreement, John Kissick agreed to subordinate his right to payments, as well as any security interest and liens on the Nixon facility's business assets, in favor of Veritex as holder of the LE Term Loan Due 2034.

(4) Loan requires monthly interest-only payments for the first thirty-six (36) months. Afterwards, principal and interest payments due monthly through loan maturity. First payment due in November 2024.

(5) Original principal amount was $0.5 million; the BDEC Term Loan Due 2051 was modified to increase the principal amount by $1.5 million. Payments deferred for thirty (30) months; first payment due December 2023; interest accrues during deferral period; loan not forgivable.

(6) Payments deferred for thirty (30) months; first payment due March 2023; interest accrued during deferral period; loan not forgivable.

(7) In May 2019, LE entered into 12-month equipment rental agreement with option to purchase backhoe at maturity; equipment rental agreement matured in May 2020; in October 2020, LE entered into the Equipment Loan Due 2025 to finance the backhoe purchase; backhoe used at the Nixon facility.

Outstanding Principal, Debt Issue Costs, and Accrued Interest

Third-party long-term debt, including outstanding principal and accrued interest, as of the dates indicated was as follows:

	December 31, 2022	December 31, 2021
	(in thousands)	
Veritex Loans		
LE Term Loan Due 2034 *(in default)*	**$ 20,801**	$ 23,789
LRM Term Loan Due 2034 *(in default)*	**8,671**	9,861
Kissick Debt *(in default)*	**11,006**	10,210
GNCU Loan		
NPS Term Loan Due 2031 (*in default*)	**9,975**	10,094
SBA EIDLs		
BDEC Term Loan Due 2051	**2,082**	512
LE Term Loan Due 2050	**162**	156
NPS Term Loan Due 2050	**162**	156
Equipment Loan Due 2025	**38**	53
	52,897	54,831
Less: Current portion of long-term debt, net	**(42,155)**	(42,953)
Less: Unamortized debt issue costs	**(2,149)**	(2,351)
Less: Accrued interest payable	**(6,271)**	(8,689)
	$ 2,322	$ 838

Unamortized debt issue costs associated with the Veritex and GNCU loans as of the dates indicated consisted of the following:

	December 31, 2022	December 31, 2021
	(in thousands)	

Veritex Loans		
LE Term Loan Due 2034 *(in default)*	**$ 1,674**	$ 1,674
LRM Term Loan Due 2034 *(in default)*	**768**	768
GNCU Loan		
NPS Term Loan Due 2031 (*in default*)	**730**	730
Less: Accumulated amortization	**(1,023)**	(821)
	$ 2,149	$ 2,351

Amortization expense was $0.2 million and $0.1 million for twelve-month periods ended December 31, 2022 and 2021, respectively.

Accrued interest related to third-party long-term debt, reflected as accrued interest payable in our consolidated balance sheets, as of the dates indicated consisted of the following:

	December 31,	
	2022	2021
	(in thousands)	
Kissick Debt *(in default)*	**$ 6,028**	$ 5,232
Veritex Loans		
LE Term Loan Due 2034 *(in default)*	**53**	2,338
LRM Term Loan Due 2034 *(in default)*	**66**	959
GNCU Loan		
NPS Term Loan Due 2031 (*in default*)	**17**	136
SBA EIDLs		
BDEC Term Loan Due 2051	**82**	12
LE Term Loan Due 2050	**12**	6
NPS Term Loan Due 2053	**12**	6
Equipment Loan Due 2025	**1**	-
	6,271	8,689
Less: Accrued interest payable (in default)	**(6,271)**	(8,689)
Long-term Interest Payable, Net of Current Portion	**$ -**	$ -

The debt associated with the LE Term Loan Due 2034, LRM Term Loan Due 2034, NPS Term Loan Due 2031, and Kissick Debt was classified within the current portion of long-term debt on our consolidated balance sheets at December 31, 2022 and 2021.

Forbearance and Defaults

Forbearance Agreement. Pursuant to the November 2022 Veritex Forbearance Agreement, Veritex agreed to forbear from exercising any of its rights and remedies related to existing defaults pertaining to covenant violations under the LE Term Loan Due 2034 and LRM Term Loan Due 2034 for a period beginning on November 18, 2022 through September 30, 2023. During the forbearance period, Veritex agreed to forbear from testing borrowers' compliance with financial covenants as specified in the LE Term Loan Due 2034 and LRM Term Loan Due 2034 and forbear from exercising its rights or remedies with respect to non-compliance with the financial covenants. As part of the Veritex Forbearance Agreement, LE and LRM paid Veritex: (i) $4.3 million in past due principal and interest at the non-default rate (excluding late fees), (ii) $1.0 million into a payment reserve account, and (iii) $0.04 million in Veritex attorney fees. In the event that LE and LRM pay off all amounts due under the LE Term Loan Due 2034 and LRM Term Loan Due 2034 on or before September 30, 2023, Veritex also agreed to waive late fees totaling approximately $0.4 million in the aggregate. The Veritex Forbearance Agreement shall terminate on the first to occur: September 30, 2023, failing to make a payment when due, breach, or any new event of default. As of December 31, 2022 and the filing date of this report, LE and LRM were in compliance with the Veritex Forbearance Agreement.

Other Defaults. We are in default under the NPS Term Loan Due 2031 due to covenant violations. We are also in payment default under the Kissick Debt related to past due payment obligations. Defaults permit the lender to declare the amounts owed under the related loan agreements immediately due and payable, exercise their rights with respect to collateral securing obligors' obligations, and/or exercise any other rights and remedies available. Any exercise by third parties of their rights and remedies under secured loan agreements that are in default will have a material adverse effect on our business operations, including crude oil and condensate procurement and our customer relationships; financial condition; and results of operations. In such a case, the trading price of our Common Stock and the value of an investment in our Common Stock could significantly decrease, which could lead to holders of our Common Stock losing their investment in our Common Stock in its entirety.

We can provide no assurance that: (i) our assets or cash flow will be sufficient to fully repay borrowings under secured loan agreements that are in default, either upon maturity or if accelerated, (ii) LE, LRM, and NPS will be able to refinance or restructure the debt, and/or (iii) third parties will provide future default waivers. Defaults under our secured loan agreements and any exercise by third parties of their rights and remedies related to such defaults may have a material adverse effect on our business, the trading price of our Common Stock, and on the value of an investment in our Common Stock, and holders of our Common Stock could lose their investment in our Common Stock in its entirety. See "Notes (1) and (3)" to our consolidated financial statements for additional information regarding defaults under our secured loan agreements and their potential effects on our business, financial condition, and results of operations.

Guarantees and Security

Loan Description	Guarantees	Security
Veritex Loans		
LE Term Loan Due 2034 (*in default*)	· USDA	· First priority lien on Nixon facility's business assets (excluding accounts receivable and inventory)
	· Jonathan Carroll[1]	· Assignment of all Nixon facility contracts, permits, and licenses
	· Affiliate cross-guarantees	· Absolute assignment of Nixon facility rents and leases, including tank rental income
		· $5.0 million life insurance policy on Jonathan Carroll
LRM Term Loan Due 2034 (*in default*)	· USDA	· Second priority lien on rights of LE in crude distillation tower and other collateral of LE

	· Jonathan Carroll[1]	· First priority lien on real property interests of LRM
	· Affiliate cross-guarantees	· First priority lien on all LRM fixtures, furniture, machinery, and equipment
		· First priority lien on all LRM contractual rights, general intangibles, and instruments, except with respect to LRM rights in its leases of certain specified tanks for which Veritex has second priority lien
		· Substantially all assets
Kissick Debt (*in default*)[2]	---	· Subordinated deed of trust that encumbers the crude distillation tower and general assets of LE
GNCU Loan		
NPS Term Loan Due 2031 (*in default)*	· USDA	· Deed of trust lien on approximately 56 acres of land and improvements owned by LE
	· Jonathan Carroll[1]	· Leasehold deed of trust lien on certain property leased by NPS from LE
	· Affiliate cross-guarantees	· Assignment of leases and rents and certain personal property
SBA EIDLs		
BDEC Term Loan Due 2051	---	· Business assets (e.g., machinery and equipment, furniture, fixtures, etc.)
LE Term Loan Due 2050	---	· Business assets (e.g., machinery and equipment, furniture, fixtures, etc.)
NPS Term Loan Due 2050	---	· Business assets (e.g., machinery and equipment, furniture, fixtures, etc.)
Equipment Loan Due 2025	---	· First priority security interest in the equipment (backhoe).

(1) Jonathan Carroll was required to personally guarantee repayment of borrowed funds and accrued interest.
(2) Pursuant to a 2015 subordination agreement, the holder of the Kissick Debt agreed to subordinate their right to payments, as well as any security interest and liens on the Nixon facility's business assets, in favor of Veritex as holder of the LE Term Loan Due 2034.

Representations, Warranties, and Covenants

The First Term Loan Due 2034, Second Term Loan Due 2034, NPS Term Loan Due 2031, BDEC Term Loan Due 2051, LE Term Loan Due 2050, and NPS Term Loan Due 2050 contain representations and warranties, affirmative and negative covenants, and events of default that we consider usual and customary for bank facilities of these types. Specifically, the First Term Loan Due 2034 contains quarterly debt service coverage and total combined current assets ratios and annual current and debt to net worth ratios; in addition, LE must maintain quarterly total combined debt and total combined tangible net worth ratios. The First Term Loan Due 2034 also requires that a $1.0 million payment reserve account be maintained. The Second Term Loan Due 2034 contains quarterly total combined current assets, total combined current liabilities, and total combined debt ratios and annual current and debt to net worth ratios. The NPS Term Loan Due 2031 requires annual maintenance of debt service coverage and current ratios. There are no covenants associated with the Kissick Debt, BDEC Term Loan Due 2051, LE Term Loan Due 2050, NPS Term Loan Due 2050, and the Equipment Loan Due 2025.

Future annual third-party long-term debt payments, certain of which are reflected as current due to defaults, are as follows:

Years Ending December 31,	Principal	Debt Issue Costs	Total
		(in thousands)	
2023	$ 44,304	$ (2,149)	$ 42,155
2024	16	-	16
2025	5	-	5
2026	-	-	-
2027	35	-	35
Subsequent to 2027	2,266	-	2,266
	$ 46,626	$ (2,149)	$ 44,477

(11) AROs

Refinery and Facilities

Management has concluded that there is no legal or contractual obligation to dismantle or remove refinery and facilities assets. Management believes that refinery and facilities assets have indeterminate lives under FASB ASC guidance for estimating AROs because dates or ranges of dates upon which we would retire these assets cannot reasonably be estimated at this time. When a legal or contractual obligation to dismantle or remove refinery and facilities assets arises and a date or range of dates can reasonably be estimated for the retirement of these assets, we will estimate the cost of performing the retirement activities and record a liability for the fair value of that cost using present value techniques.

Pipelines and Facilities and Oil and Gas Properties

We have AROs associated with decommissioning our pipelines and facilities assets, as well as plugging and abandoning our oil and gas properties. We recorded a discounted liability for the fair value of an ARO with a corresponding increase to the carrying value of the related long-lived asset at the time the asset was installed or placed in service, and we depreciated the amount added to property and equipment. During the twelve months ended December 31, 2021, we determined that the estimated future cost and timing of decommissioning these assets changed. As a result, we recorded an increase in liability at December 31, 2021. We recorded an additional increase in liability during the twelve months ended December 31, 2022 due to a further change in timing; BSEE mandated that decommissioning must occur prior to June 1, 2023. We will recognize accretion expense through the anticipated decommissioning date.

ARO liability as of the dates indicated was as follows:

	December 31,	
	2022	2021
	(in thousands)	
AROs, at the beginning of the period	**$ 3,461**	$ 2,370
Changes in estimates of existing obligations	**114**	1,091
Accretion expense	**135**	-

		-		3,461
Less: AROs, current portion		**(3,710)**		-
Long-term AROs, at the end of the period	**$**	**-**	$	3,461

See "Note (15)" to our consolidated financial statements for disclosures related to decommissioning of our offshore pipelines and platform assets and related risks.

(12) Lease Obligations

Lease Obligations

Office Lease. We maintain our corporate headquarters in Houston, Texas. The 68-month operating lease, with BDSC as lessee, expires in August 2023. BDSC had an option to extend the lease term for an additional five (5) year period. However, BDSC is considering the economic advantages of alternative locations.

In March 2021, BDSC defaulted on the office lease due to non-payment of rent. In May 2021, BDSC and TR 801 Travis LLC ("Building Lessor") reached an agreement to cure BDSC's office lease default. Under a Fourth Amendment to Lease dated May 27, 2021 (the "Fourth Amendment"), Building Lessor agreed to defer BDSC's past due obligations, including rent installments and other charges totaling approximately $0.1 million (the "Past Due Obligations"), in equal monthly installments beginning in June 2021, and continuing through lease expiration The Past Due Obligations were subject to an annual percentage rate of 4.50%. As revised under the Fourth Amendment, BDSC's base rent including the prorated portion of the Past Due Obligations was $0.02 million per month.

Subsequent to the Fourth Amendment, Building Lessor notified BDSC of a new default under the office lease due to non-payment of rent. As a result of the subsequent default, Building Lessor deemed the Fourth Amendment invalid. On June 9, 2022, BDSC paid all past due amounts totaling approximately $0.2 million to Building Lessor and Building Lessor considered the office lease default cured.

An Affiliate, LEH, subleases a portion of the Houston office space. BDSC received sublease income from LEH totaling $0.03 million for both twelve-month periods ended December 31, 2022 and 2021. See "Note (3)" to our consolidated financial statements for additional disclosures related to the Affiliate sub-lease.

The following table presents the lease-related assets and liabilities recorded on the consolidated balance sheet:

	Balance Sheet Location	December 31, 2022	December 31, 2021
		(in thousands)	
Assets			
Operating lease ROU assets	Operating lease ROU assets	**$787**	$787
Less: Accumulated amortization on operating lease assets	Operating lease ROU assets	**(638)**	(455)
Total lease assets		**149**	332
Liabilities			
Current			
Operating lease	Current portion of lease liabilities	**156**	215
Noncurrent			
Operating lease	Long-term lease liabilities, net of current	**-**	156
		$156	$371

Weighted average remaining lease term in years	
Operating lease	**0.67**
Weighted average discount rate	
Operating lease	**8.25%**

The following table presents information related to lease costs incurred for operating and finance leases:

	Twelve Months Ended December 31, 2022		Twelve Months Ended December 31, 2021	
	(in thousands)			
Operating lease costs	**$**	**206**	$	206
Total lease cost	**$**	**206**	$	206

The table below presents supplemental cash flow information related to leases as follows:

	Twelve Months Ended December 31,	
	2022	2021
	(in thousands)	
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows for operating lease	**$ 237**	$ 233

As of December 31, 2022, maturities of lease liabilities for the periods indicated were as follows:

December 31,	Operating Lease
	(in thousands)
2023	$ 156
	$ 156

Future minimum annual lease commitments that are non-cancelable:

December 31,	Operating Lease
	(in thousands)
2023	$ 161
	$ 161

(13) Income Taxes

The Inflation Reduction Act ("IRA") was enacted into law in August 2022. The IRA imposes a 15% alternative minimum tax on corporations whose average annual adjusted financial statement income during the most recently completed three-year period exceeds $1.0 billion. We do not fall within the category of “applicable corporations” and are therefore exempt from payment of an alternative minimum tax.

Tax Provision

The provision for income tax benefit (expense) for the periods indicated was as follows:

	Twelve Months Ended December 31,	
	2022	2021
	(in thousands)	
Current		
Federal	**$ -**	$ -
State	**307**	-
Deferred		
Federal	**7,223**	2,335
State	**-**	-
Change in valuation allowance	**(7,223)**	(2,335)
Total provision for income taxes	**$ 307**	$ -

GAAP treats Texas margins tax, a form of business tax imposed on an entity’s gross profit rather than its net income, like an income tax for financial reporting purposes.

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Effective Tax Rate

Our effective tax rate was as follows:

	December 31,			
	2022		**2021**	
Expected tax rate	**$ 7,223**	**21.00%**	$ 2,335	21.00%
Permanent differences	**-**	**0.00%**		0.00%
State tax	**307**	**0.92%**		0.00%
Federal tax		**0.00%**		0.00%
Change in valuation allowance	**(7,223)**	**(21.00%)**	(2,335)	(21.00%)
	307	**0.92%**	-	0.00%

Our effective tax rate differed from the U.S. federal statutory rate primarily due to AMT credits made refundable by the Tax Cuts and Jobs Act. At the date of enactment of the Tax Cuts and Jobs Act, we re-measured our deferred tax assets and liabilities using a rate of 21%, which is the rate expected to be in place when such deferred assets and liabilities are expected to reverse in the future. The re-measurement was offset by a change in our valuation allowance, resulting in there being no impact on our net deferred tax assets.

Deferred income taxes as of the dates indicated consisted of the following:

	December 31, 2022	December 31, 2021
	(in thousands)	
Deferred tax assets:		
NOL and capital loss carryforwards	**$ 11,088**	$ 16,818
Business interest expense	**3,524**	4,680
Start-up costs (crude oil and condensate processing facility)	**339**	424
ARO liability/deferred revenue	**779**	727
Other	**43**	12
Total deferred tax assets	**15,773**	22,661
Deferred tax liabilities:		
Basis differences in property and equipment	**(8,216)**	(7,945)
Total deferred tax liabilities	**(8,216)**	(7,945)
	7,557	14,716
Valuation allowance	**(7,557)**	(14,716)
Deferred tax assets, net	**$ -**	$ -

Deferred Income Taxes

Balances for deferred income tax represent the effects of temporary differences between carrying amounts and the actual income tax basis of our assets and liabilities; the balances also reflect NOL carryforwards. We record the balances based on tax rates we expect to be in effect when paid. NOL carryforwards and deferred tax assets represent amounts available to reduce future taxable income.

NOL Carryforwards. Under IRC Section 382, a corporation that undergoes an “ownership change” is subject to limitations on its use of pre-change NOL carryforwards to offset future taxable income. Within the meaning of IRC Section 382, an “ownership change” occurs when the aggregate stock ownership of stockholders who own more than 5% (after applying certain look-through rules) increase by more than fifty percent (50% over such stockholders’ lowest percentage ownership during the testing period (generally three years). Based on the tax rule, ownership changes occurred in 2005 and 2012. The 2005 ownership change related to a series of private placements; the 2012 ownership change related to a reverse acquisition.

The 2005 and 2012 ownership changes limit the use of pre-change NOL carryforwards to offset future taxable income. The annual use limitation generally equals the value of the common stock, on an aggregate basis, when the ownership change occurred multiplied by a specified tax-exempt interest rate. The 2012 ownership change will subject approximately $16.3 million in NOL carryforwards generated before the ownership change to an annual use limitation of roughly $0.6 million per year. We may use any unused portions of the limitation in subsequent years. Because of the yearly restriction, approximately $6.7 million in NOL carryforwards generated before the 2012 ownership change will expire unused. NOL carryforwards generated after the 2012 ownership change but before 2018 are not subject to an annual use limitation; we can use these NOL carryforwards for 20 years in addition to NOL carryforward amounts generated before the ownership change. NOL carryforwards that were generated beginning in 2018 may only be used to offset 80% of taxable income and are carried forward indefinitely.

NOL Carryforwards. NOL carryforwards that remained available for future use for the periods indicated were as follow (amounts shown are net of NOLs that will expire unused because of the IRC Section 382 limitation):

	Net Operating Loss Carryforward: Pre-Ownership Change	Net Operating Loss Carryforward: Post-Ownership Change	Total
		(in thousands)	
Balance at December 31, 2020	9,614	56,363	65,977
Net operating losses used and expired	(1,717)	9,148	7,431
Balance at December 31, 2021	$ 7,897	$ 65,511	$ 73,408
Net operating losses used and expired	**(6,127)**	**(22,384)**	**(28,511)**
Balance at December 31, 2022	**$ 1,770**	**$ 43,127**	**$ 44,897**

Valuation Allowance. As of each reporting date, management considers new evidence, both positive and negative, to determine the realizability of deferred tax assets. This assessment (of whether there is more than a 50% probability that our deferred tax asset is realizable) depends on the generation of future taxable income before the expiration of any NOL carryforwards. At December 31, 2022 and 2021, management determined that realization of the deferred tax assets from NOLs is unlikely based on negative evidence of three-year cumulative net losses. Cumulative net losses represent significant negative objective evidence, limiting the ability to consider other subjective evidence, such as projections for future growth. Based on management’s evaluation, we recorded a valuation allowance against the deferred tax assets as of December 31, 2022 and 2021.

We have NOL carryforwards that remain available for future use. At December 31, 2022 and 2021, there were no uncertain tax positions for which a reserve or liability was necessary.

(14) Earnings and Dividends Per Share

A reconciliation between basic and diluted income per share for the periods indicated was as follows:

	Twelve Months Ended December 31, 2022	2021
	(in thousands, except share and per share amounts)	
Net income (loss)	**$ 32,892**	$ (12,841)
Earnings per share		
Basic and diluted income (loss) per share	**$ 2.34**	$ (1.01)
Basic and diluted shares used in computing earnings per share	**14,079,327**	12,693,514

Diluted EPS for the twelve months ended December 31, 2022 and 2021 was the same as basic EPS as there were no stock options or other dilutive instruments outstanding. Diluted EPS is computed by dividing net income available to common stockholders by the weighted average number of shares of common stock outstanding.

Shareholders are entitled to receive such dividends as may be declared by our Board out of funds legally available for such purpose. However, no dividend may be declared or paid unless after-tax profit was made in the preceding fiscal year, we are in compliance with covenants in our secured loan agreements, we are current on all required debt payments, and we have received prior written concurrence from certain of our lenders.

(15) Commitments and Contingencies

Amended and Restated Operating Agreement

See "Note (3)" to our consolidated financial statements for additional disclosures related to operation and management of all Blue Dolphin assets by an Affiliate under the Amended and Restated Operating Agreement.

BSEE Offshore Pipelines and Platform Decommissioning

BDPL has pipelines and platform assets that are subject to BSEE's idle iron regulations. Idle iron regulations mandate lessees and rights-of-way holders to permanently abandon and/or remove platforms and other structures when they are no longer useful for operations. Until such structures are abandoned or removed, lessees and rights-of-way holders are required to inspect and maintain the assets in accordance with regulatory requirements.

In December 2018, BSEE issued an INC to BDPL for failing to flush and fill Pipeline Segment No. 13101. Management met with BSEE in August 2019 to address BDPL's plans with respect to decommissioning its offshore pipelines and platform assets. BSEE proposed that BDPL re-submit pipeline and platform decommissioning permit applications, including a safe boarding plan, by February 2020. BDPL submitted permit applications to BSEE in February 2020 and the USACOE in March 2020. In April 2020, BSEE issued another INC to BDPL for failing to perform the required structural surveys for the GA-288C Platform. BDPL completed the required platform surveys in June 2020.

In August 2022, BSEE issued an INC to BDPL for failing to complete decommissioning its main offshore pipeline and anchor platform. In addition, pursuant to a September 2022 letter, BSEE ordered BDPL to complete pipeline decommissioning and removal of the anchor platform by June 1, 2023. BDPL is examining the feasibility of completing decommissioning operations by BSEE's deadline. In March 2023, BSEE issued an INC to BDPL for failing to perform the required structural surveys for the GA-288C platform for 2021 and 2022, and for failing to provide BSEE with such survey results. BDPL is obtaining vendor quotes for the performance of the required surveys and intends to submit a corrective action plan to BSEE. If BDPL fails to complete decommissioning of the offshore pipeline and platform assets and/or remedy the INCs within the timeframe mandated by BSEE, BDPL could be subject to regulatory oversight and enforcement, including but not limited to failing to correct an INC, civil penalties, and revocation of BDPL's operator designation, which could have a material adverse effect on our earnings, cash flows, and liquidity.

We cannot currently estimate when decommissioning may occur or predict the outcome of the BSEE INCs. Accordingly, we did not record a liability related to potential penalties on our consolidated balance sheets as of December 31, 2022 and 2021. At December 31, 2022 and 2021, BDPL maintained $3.7 million and $3.5 million, respectively, in AROs related to abandonment of these assets, which amount does not include potential penalties.

Defaults Under Secured Loan Agreements with Third Parties and Related Parties

See "Notes (1), (3), and (10)" to our consolidated financial statements for additional disclosures related to defaults under our secured and unsecured debt agreements.

Financing Agreements and Guarantees

Indebtedness. See "Notes (1), (3), and (10)" to our consolidated financial statements for disclosures related to Affiliate and third-party indebtedness and defaults thereto.

Guarantees. Affiliates provided guarantees on certain debt of Blue Dolphin and its subsidiaries. The maximum amount of any guarantee is equal to the principal amount and accrued interest, which amounts are reduced as payments are made. See "Notes (1), (3), and (10)" to our consolidated financial statements for additional disclosures related to Affiliate and third-party guarantees associated with indebtedness and defaults thereto.

Health, Safety and Environmental Matters

The operations of certain Blue Dolphin subsidiaries are subject to extensive federal, state, and local environmental, health, and safety regulations governing, among other things, the generation, storage, handling, use and transportation of petroleum products and hazardous substances; the emission and discharge of materials into the environment; waste management; characteristics and composition of jet fuel and other products; and the monitoring, reporting and control of air emissions. These operations also require numerous permits and authorizations under various environmental, health, and safety laws and regulations. Failing to obtain and comply with these permits or environmental, health, or safety laws could result in fines, penalties or other sanctions, or a revocation of our permits.

Share Issuances
We are obligated to issue shares of our Common Stock to: (i) Jonathan Carroll pursuant to the Guaranty Fee Agreements and (ii) non-employee directors for services rendered to the Board. Set forth below is information regarding the issuance of Common Stock related to these obligations during the twelve months ended December 31, 2022 and 2021:

Services.
- On October 27, 2022, we issued an aggregate of 24,591 restricted shares of Common Stock to certain of our non-employee, independent directors, which represents payment for services rendered to the Board for the three-month period ended September 30, 2022. The cost basis was $1.22.
- On May 12, 2022, we issued an aggregate of 252,447 restricted shares of Common Stock to certain of our non-employee, independent directors, which represents payment for services rendered to the Board for the three-month periods ended September 30, 2020, March 31, 2021, September 30, 2021, and March 31, 2022. The average cost basis was $0.55, the low was $0.33, and the high was $0.91.

Payment of Debt.
- On September 6, 2022, we issued an aggregate of 98,336 restricted shares of Common Stock to Jonathan Carroll, which represents payment of the common stock component under the LE Amended and Restated Guaranty Fee Agreement and LRM Amended and Restated Guaranty Fee Agreement for monthly periods from April 2022 to June 2022. The average cost basis was $0.86, the low was $0.58, and the high was $1.26.
- On May 12, 2022, we issued an aggregate of 1,853,080 restricted shares of Common Stock to Jonathan Carroll, which represents payment of the common stock component under the LE Amended and Restated Guaranty Fee Agreement and LRM Amended and Restated Guaranty Fee Agreement for monthly periods from April 2020 through March 2022. The average cost basis was $0.42, the low was $0.27, and the high was $0.64.

The securities issuances were exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act. We recognized a loss on the issuance of shares of approximately $0.4 million and $0 for the twelve months ended December 31, 2022 and 2021, respectively. See "Notes (1), (3) and (15)" to our consolidated financial statements for additional disclosures related to Affiliates and working capital deficits, as well as for information related to the LE Amended and Restated Guaranty Fee Agreement and LRM Amended and Restated Guaranty Fee Agreement.

Legal Matters
In the ordinary course of business, we are involved in legal matters incidental to the routine operation of our business, such as mechanic's liens and contract-related disputes. We may also become party to lawsuits, administrative proceedings, and governmental investigations, including environmental, regulatory, and other matters. Large, and sometimes unspecified, damages or penalties may be sought from us in some matters and certain matters may require years to resolve. Although we cannot provide assurance, we believe that an adverse resolution of the matters described below would not have a material impact on our liquidity, consolidated financial position, or consolidated results of operations.

Unresolved Matters.
Pilot Dispute Related to Terminal Services Agreement.
Effective May 9, 2019, NPS and Pilot entered into a Terminal Services Agreement, pursuant to which NPS agreed to store jet fuel purchased by Pilot at the Nixon facility. On August 25, 2022, Pilot provided the required 60-days' notice of its intent to terminate the Terminal Services Agreement, which became effective on October 24, 2022. As of the Terminal Services Agreement termination date, approximately 185,000 bbls of Pilot's jet fuel remained at the Nixon facility.

On October 28, 2022, Pilot commenced an action and application for a temporary restraining order ("TRO") against NPS in Harris County District Court (the "Texas Action"). After a hearing on the application on October 28, 2022, Pilot's application for the TRO was denied the same day.

On December 2, 2022, NPS filed its answer in the Texas Action. On December 6, 2022, NPS provided notice under Section 7.206(a) of the Texas Business and Commerce Code ("TBCC") of its intent to sell the remaining inventory of Pilot's jet fuel at the Nixon facility by January 7, 2023. After a series of negotiations, NPS agreed to forbear from exercising its remedies under the TBCC while the parties explored a potential compromise of the dispute. The parties entered a Forbearance and Accommodation Agreement on January 12, 2023, with the forbearance period terminating on February 28, 2023. As part of the Forbearance and Accommodation Agreement, Pilot paid NPS approximately $1.481 million on January 13, 2023.

On March 31, 2023, NPS and Pilot executed an Amendment to the Forbearance and Accommodation Agreement ("March 31 Amendment") with the forbearance term extending to June 15, 2023. The March 31 Amendment requires an additional payment by Pilot to NPS of approximately $1.08 million on April 3, 2023 and a conditional payment of $0.18 million on June 1, 2023.

Pursuant to the March 31 Amendment all deadlines in the Texas Action have been tolled through June 15, 2023.

As of the filing date of this report, no settlement has been reached.

BOEM Additional Financial Assurance (Supplemental Pipeline Bonds). To cover the various obligations of lessees and rights-of-way holders operating in federal waters of the Gulf of Mexico, BOEM evaluates an operator's financial ability to carry out present and future obligations to determine whether the operator must provide additional security beyond the statutory bonding requirements. Such obligations include the cost of plugging and abandoning wells and decommissioning pipelines and platforms at the end of production or service activities. Once plugging and abandonment work has been completed, the collateral backing the financial assurance is released by BOEM.

BDPL historically maintained $0.9 million in financial assurance to BOEM for the decommissioning of its trunk pipeline offshore in federal waters. Following an agency restructuring of the financial assurance program, in March 2018 BOEM ordered BDPL to provide additional financial assurance totaling approximately $4.8 million for five (5) existing pipeline rights-of-way. In June 2018, BOEM issued BDPL INCs for each right-of-way that failed to comply. BDPL appealed the INCs to the IBLA. Although the IBLA granted multiple extension requests, the Office of the Solicitor of the U.S. Department of the Interior indicated that BOEM would not consent to further extensions. The solicitor's office signaled that BDPL's adherence to milestones identified in an August 2019 meeting between management and BSEE may help in future discussions with BOEM related to the INCs. Decommissioning of these assets will significantly reduce or eliminate the amount of financial assurance required by BOEM, which may serve to partially or fully resolve the INCs.

BDPL's pending appeal of the BOEM INCs does not relieve BDPL of its obligations to provide additional financial assurance or of BOEM's authority to impose financial penalties. There can be no assurance that we will be able to meet additional financial assurance (supplemental pipeline bond) requirements. If BDPL is required by BOEM to provide significant additional financial assurance (supplemental pipeline bonds) or is assessed significant penalties under the INCs, we will experience a significant and material adverse effect on our operations, liquidity, and financial condition.

We are currently unable to predict the outcome of the BOEM INCs. Accordingly, we did not record a liability on our consolidated balance sheets as of December 31, 2022 and 2021. At both December 31, 2022 and 2021, BDPL maintained approximately $0.9 million in pipeline rights-of-way surety bonds issued to BOEM through RLI Corp. Of the pipeline rights-of-way bonds, $0.7 million was credit-backed and $0.2 million was cash-backed.

OSHA Settlement Agreement. In September 2022, we entered into an Informal Settlement Agreement with OSHA related to process safety management violations at the Nixon refinery. Under the agreement, we paid penalties totaling $0.05 million in November 2022. We remediated a significant portion of identified violations prior to December 31, 2022. Most of the remaining violations were remediated on a progressive schedule prior to March 31, 2023. Work on the final violation is in progress, and we expect to complete the work in April 2023. Failing to abide by the terms of the agreed could result in additional fines.

TCEQ Proposed Agreed Order. In October 2021, LRM received a proposed agreed order from the TCEQ for alleged solid and hazardous waste violations discovered during an investigation from January to March 2020. The proposed agreed order assessed an administrative penalty of approximately $0.4 million and identified actions needed to correct the alleged violations. We are currently seeking to negotiate a reduced penalty amount. In May 2022, management met with the TCEQ to review the alleged solid hazardous waste violations. As follow-up to the meeting, LRM provided additional documentation to the TCEQ in a June 2022 letter. On March 29, 2023, TCEQ requested a meeting in April 2023 to review LRM's submissions to date. We recorded a liability for the maximum proposed amount of $0.4 million on our consolidated balance sheets within accrued expenses and other current liabilities as of December 31, 2022 and 2021. We cannot currently estimate when the TCEQ hazardous waste matter will be resolved or predict the outcome of the violations.

Pilot Dispute Related to Set-Off Payments. In October 2021, NPS repaid all obligations owed to Pilot under the Amended Pilot Line of Credit. However, in a letter from NPS to Pilot dated October 28, 2021, NPS disputed approximately $0.3 million in set-off payments between Pilot and NPS. As of the filing date of this report, the amount remained in dispute between the parties.

Defaults under Secured Loan Agreements. We are currently in default under certain of our secured loan agreements with third parties and related parties. See "Notes (1), (3), and (10)" to our consolidated financial statements for additional disclosures related to third-party and related-party debt, defaults on such debt, and the potential effects of such defaults on our business, financial condition, and results of operations. If third parties exercise their rights and remedies due to defaults under our secured loan agreements, our business, financial condition, and results of operations will be materially adversely affected.

Counterparty Contract-Related Dispute. As of the filing date of this report, we were involved in a contract-related dispute with Tartan involving a revenue sharing-arrangement for the storage and sale of crude oil. Management is working to resolve the dispute amicably, however, the potential outcome is unknown. Management does not believe that the contract-related dispute will have a material adverse effect on our financial position, earnings, or cash flows. However, there can be no assurance that management's efforts will result in a manageable outcome.

(16) Subsequent Events

Second Amended and Restated Operating Agreement
The Second Amended and Restated Operating Agreement was renewed with an effective date of April 1, 2023, and was executed on March 14, 2023. The renewal term begins on the effective date and expires upon the earliest to occur of the following: (a) upon the first anniversary of the effective date, which termination date shall be April 1, 2024, (b) upon written notice of either party upon the material breach of the agreement by the other party, or (c) upon 90 days' notice by the Board if the Board determines that the Second Amended and Restated Operating Agreement is not in the best interest of Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and/or BDSC. With the exception of the term length, terms of the Second Amended and Restated Operating Agreement were the same as the Amended and Restated Operating Agreement. For services rendered: (a) Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and BDSC shall reimburse LEH at cost for all direct expenses, either paid directly by LEH or financed with LEH's credit card. Amounts payable to LEH shall be invoiced by LEH weekly but may be reimbursed sooner and (b) Blue Dolphin shall also pay to LEH a management fee equal to 5% of all consolidated operating costs, excluding crude costs, depreciation, amortization, and interest.

Guaranty Fee Agreements
Jonathan Carroll was required to provide his personal guarantee on certain of our secured loan agreements.

- BDEC Guaranty Fee Agreement – The BDEC Guaranty Fee Agreement, with an effective date of January 1, 2023, was executed on March 14, 2023. Under the BDEC Guaranty Fee Agreement, Jonathan Carroll shall receive a fee equal to 2.00% per annum of the outstanding principal balance owed under the BDEC Term Loan Due 2051, payable 100% in cash.
- NPS Guaranty Fee Agreement – The NPS Guaranty Fee Agreement, with an effective date of January 1, 2023, was executed on March 14, 2023. Under the NPS Guaranty Fee Agreement, Jonathan Carroll shall receive a fee equal to 2.00% per annum of the outstanding principal balance owed under the NPS Term Loan Due 2031, payable 100% in cash.
- LE Amended and Restated Guaranty Fee Agreement – The LE Amended and Restated Guaranty Fee Agreement was further amended and restated with an effective date of January 1, 2023; the agreement was executed on March 14, 2023. As further amended and restated, Jonathan Carroll shall receive a fee equal to 2.00% per annum of the outstanding principal balance owed under the LE Term Loan Due 2034, payable 100% in cash.
- LRM Amended and Restated Guaranty Fee Agreement – The LRM Amended and Restated Guaranty Fee Agreement was further amended and restated with an effective date of January 1, 2023; the agreement was executed on March 14, 2023. As further amended and restated, Jonathan Carroll shall receive a fee equal to 2.00% per annum of the outstanding principal balance owed under the LRM Term Loan Due 2034, payable 100% in cash.

The amounts expensed related to the guaranty fee agreements are reflected within interest and other expense in our consolidated statements of operations.

Master Services Agreement
Effective March 1, 2023, LE entered a Master Services Agreement with Ingleside for storage of products intended for customer receipt by barge. The agreement has a three-year term. The tank rental fee is $0.50 per bbl per month. The agreement was executed on March 14, 2023.

Jet Fuel Sales Agreement
Effective April 1, 2023, LE entered into a renewed Jet Fuel Sales Agreement with LEH. The agreement has a one year term expiring on the earliest to occur of March 31, 2024 plus a 30-day carryover or delivery of the maximum jet fuel quantity. The agreement was executed on March 24, 2023.

Together, Jonathan Carroll and LEH own approximately 83% of Blue Dolphin's Common Stock. See "Note (3)" of our consolidated financial statements for additional disclosures related to agreements with Affiliates.

Terminal Services Agreement
Effective November 1, 2022, NPS entered a Terminal Services Agreement with LEH for the storage of jet fuel by LEH. The agreement has a one year term with one-year automatic renewals. The tank rental fee is approximately $0.2 million per month. The agreement was ratified by the Board on March 7, 2023.

Master Service Agreement
Effective March 1, 2023, LE entered a Master Service Agreement with Ingleside for the storage of product intended for customer receipt by barge. The agreement has a three-year term. The tank rental fee is $0.50 per bbl per month. The agreement was approved by the Board on March 7, 2023.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures
Disclosure controls and procedures are controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified by SEC rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act is accumulated and communicated to our Chief Executive Officer (principal executive officer, principal financial officer, and principal accounting officer) to allow timely decisions regarding required disclosure. Under the supervision of, and with the participation of our management, including our Chief Executive Officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of the end of the period covered by this report. Based on our evaluation, our Chief Executive Officer (principal executive officer, principal financial officer, and principal accounting officer) concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act, are recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms.

Management's Report on Internal Control over Financial Reporting
Management's Responsibility. Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the U.S.

There are inherent limitations in the effectiveness of any control system, including the potential for human error and the possible circumvention or overriding of controls and procedures. Additionally, judgments in decision-making can be faulty and breakdowns can occur because of a simple error or mistake. An effective control system can provide only reasonable, not absolute, assurance that the control objectives of the system are adequately met. Accordingly, management does not expect that the control system can prevent or detect all errors or fraud. Further, projections of any evaluation or assessment of effectiveness of a control system to future periods are subject to the risks that, over time, controls may become inadequate because of changes in an entity's operating environment or deterioration in the degree of compliance with policies or procedures.

Management's Assessment. Management, under the supervision and with the participation of our Chief Executive Officer (principal executive officer, principal financial officer, and principal accounting officer), assessed the effectiveness of our internal controls over financial reporting at December 31, 2022. In making this assessment, management used the criteria set forth by the 2013 Committee of Sponsoring Organizations of the Treadway Commission Framework and SOX Compliance. Management determined that our internal controls over financial reporting were effective for the twelve months ended December 31, 2022.

Changes in Internal Control over Financial Reporting. There have been no changes in our internal control over financial reporting that materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Exemption from Management's Report on Internal Control over Financial Reporting. This report does not include an attestation report of our registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by our registered public accounting firm pursuant to rules of the SEC for smaller reporting companies that permit us to provide only management's attestation in this report.

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ITEM 9B. OTHER INFORMATION

Common Stock Issuances
Set forth below is information regarding the issuance of Common Stock by us for the years ended December 31, 2022 and 2021:

Services.

- On October 27, 2022, we issued an aggregate of 24,591 restricted shares of Common Stock to certain of our non-employee, independent directors, which represents payment for services rendered to the Board for the three-month period ended September 30, 2022. The cost basis was $1.22.
- On May 12, 2022, we issued an aggregate of 252,447 restricted shares of Common Stock to certain of our non-employee, independent directors, which represents

payment for services rendered to the Board for the three-month periods ended September 30, 2020, March 31, 2021, September 30, 2021, and March 31, 2022. The average cost basis was $0.55, the low was $0.33, and the high was $0.91.

Payment of Debt.

- On September 6, 2022, we issued an aggregate of 98,336 restricted shares of Common Stock to Jonathan Carroll, which represents payment of the common stock component under the LE Amended and Restated Guaranty Fee Agreement and LRM Amended and Restated Guaranty Fee Agreement for monthly periods from April 2022 to June 2022. The average cost basis was $0.86, the low was $0.58, and the high was $1.26.
- On May 12, 2022, we issued an aggregate of 1,853,080 restricted shares of Common Stock to Jonathan Carroll, which represents payment of the common stock component under the LE Amended and Restated Guaranty Fee Agreement and LRM Amended and Restated Guaranty Fee Agreement for monthly periods from April 2020 through March 2022. The average cost basis was $0.42, the low was $0.27, and the high was $0.64.

The issuance of these securities were exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act. See "Part II, Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities," "Part II, Item 9B. Other Information," and "Note (15)" to our consolidated financial statements for additional disclosures related to share issuances.

Second Amended and Restated Operating Agreement

The Second Amended and Restated Operating Agreement was renewed with an effective date of April 1, 2023, and was executed on March 14, 2023. The renewal term begins on the effective date and expires upon the earliest to occur of the following: (a) the first anniversary of the effective date, which termination date shall be April 1, 2024, (b) upon written notice of either party upon the material breach of the agreement by the other party, or (c) upon 90 days' notice by the Board if the Board determines that the Second Amended and Restated Operating Agreement is not in the best interest of Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and/or BDSC. With the exception of the term length, terms of the Second Amended and Restated Operating Agreement were the same as the Amended and Restated Operating Agreement. For services rendered: (a) Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and BDSC shall reimburse LEH at cost for all direct expenses, either paid directly by LEH or financed with LEH's credit card. Amounts payable to LEH shall be invoiced by LEH weekly but may be reimbursed sooner and (b) Blue Dolphin shall also pay to LEH a management fee equal to 5% of all consolidated operating costs, excluding crude costs, depreciation, amortization, and interest.

The foregoing summarizes the material terms of the Second Amended and Restated Operating Agreement, which is filed as Exhibit 10.42 to this report.

Guaranty Fee Agreements

Jonathan Carroll was required to provide his personal guarantee on certain of our secured loan agreements.

- BDEC Guaranty Fee Agreement – The BDEC Guaranty Fee Agreement, with an effective date of January 1, 2023, was executed on March 14, 2023. Under the BDEC Guaranty Fee Agreement, Jonathan Carroll shall receive a fee equal to 2.00% per annum of the outstanding principal balance owed under the BDEC Term Loan Due 2051, payable 100% in cash.
- NPS Guaranty Fee Agreement – The NPS Guaranty Fee Agreement, with an effective date of January 1, 2023, was executed on March 14, 2023. Under the NPS Guaranty Fee Agreement, Jonathan Carroll shall receive a fee equal to 2.00% per annum of the outstanding principal balance owed under the NPS Term Loan Due 2031, payable 100% in cash.
- LE Amended and Restated Guaranty Fee Agreement – The LE Amended and Restated Guaranty Fee Agreement was further amended and restated with an effective date of January 1, 2023; the agreement was executed on March 14, 2023. As further amended and restated, Jonathan Carroll shall receive a fee equal to 2.00% per annum of the outstanding principal balance owed under the LE Term Loan Due 2034, payable 100% in cash.
- LRM Amended and Restated Guaranty Fee Agreement – The LRM Amended and Restated Guaranty Fee Agreement was further amended and restated with an effective date of January 1, 2023; the agreement was executed on March 14, 2023. As further amended and restated, Jonathan Carroll shall receive a fee equal to 2.00% per annum of the outstanding principal balance owed under the LRM Term Loan Due 2034, payable 100% in cash.

The amounts expensed related to the guaranty fee agreements are reflected within interest and other expense in our consolidated statements of operations.

The foregoing summarizes the material terms of the BDEC Guaranty Fee Agreement, NPS Guaranty Fee Agreement, LE Amended and Restated Guaranty Fee Agreement, and LRM Amended and Restated Guaranty Fee Agreement, which are filed as Exhibit 10.43, Exhibit 10.44, Exhibit 10.45, and Exhibit 10.46, respectively, to this report.

Master Services Agreement

Effective March 1, 2023, LE entered a Master Services Agreement with Ingleside for storage of products intended for customer receipt by barge. The agreement has a three-year term. The tank rental fee is $0.50 per bbl per month. The agreement was executed on March 14, 2023.

Jet Fuel Sales Agreement

Effective April 1, 2023, LE entered into a renewed Jet Fuel Sales Agreement with LEH. The agreement has a one year term expiring on the earliest to occur of March 31, 2024 plus a 30-day carryover or delivery of the maximum jet fuel quantity. The agreement was executed on March 24, 2023.

Together, Jonathan Carroll and LEH own approximately 83% of Blue Dolphin's Common Stock. See "Note (3)" and "Note 16") of our consolidated financial statements for additional disclosures related to agreements with Affiliates.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

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PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

The information required in response to this Item 10 is incorporated herein by reference to our definitive proxy statement relating to our 2023 Annual Meeting of Stockholders to be filed with the SEC pursuant to Regulation 14A, not later than 120 days after the end of our fiscal year covered by this report.

ITEM 11. EXECUTIVE COMPENSATION

The information required in response to this Item 11 is incorporated herein by reference to our definitive proxy statement relating to our 2023 Annual Meeting of Stockholders to be filed with the SEC pursuant to Regulation 14A, not later than 120 days after the end of our fiscal year covered by this report.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required in response to this Item 12 is incorporated herein by reference to our definitive proxy statement relating to our 2023 Annual Meeting of Stockholders to be filed with the SEC pursuant to Regulation 14A, not later than 120 days after the end of our fiscal year covered by this report.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required in response to this Item 13 is incorporated herein by reference to our definitive proxy statement relating to our 2023 Annual Meeting of Stockholders to be filed with the SEC pursuant to Regulation 14A, not later than 120 days after the end of our fiscal year covered by this report.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required in response to this Item 14 is incorporated herein by reference to our definitive proxy statement relating to our 2023 Annual Meeting of Stockholders to be filed with the SEC pursuant to Regulation 14A, not later than 120 days after the end of our fiscal year covered by this report.

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PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

Exhibits and Financial Statement Schedules

Following is a list of documents filed as part of this report:

- Consolidated balance sheets, consolidated statements of operations, consolidated statements of shareholders' equity (deficit), and consolidated statements of cash flows, which appear in "Part II, Item 8.Financial Statements and Supplementary Data".
- Exhibits as listed in the exhibit index of this report, which is incorporated herein by reference.

ITEM 16. FORM 10-K SUMMARY

Not applicable.

Exhibits Index

No.	Description
3.1	Amended and Restated Certificate of Incorporation of Blue Dolphin (incorporated by reference to Exhibit 3.1 filed with Blue Dolphin's Form 8-K on June 2, 2009, Commission File No. 000-15905)
3.2	Amended and Restated By-Laws of Blue Dolphin (incorporated by reference to Exhibit 3.1 filed with Blue Dolphin's Form 8-K on December 26, 2007, Commission File No. 000-15905)
4.1	Specimen Stock Certificate (incorporated by reference to exhibits filed with Blue Dolphin's Form 10-K on March 30, 1990, Commission File No. 000-15905)
4.2	Description of company securities.
10.1*	Blue Dolphin 2000 Stock Incentive Plan (incorporated by reference to Appendix 1 filed with Blue Dolphin's Proxy Statement on Form DEF 14A on April 20, 2000, Commission File No. 000-15905)
10.2*	First Amendment to the Blue Dolphin 2000 Stock Incentive Plan (incorporated by reference to Appendix B filed with Blue Dolphin's Proxy Statement on Form DEF 14A on April 16, 2003, Commission File No. 000-15905)
10.3*	Second Amendment to the Blue Dolphin 2000 Stock Incentive Plan (incorporated by reference to Appendix A filed with Blue Dolphin's Proxy Statement on Form DEF 14A on April 27, 2006, Commission File No. 000-15905)
10.4*	Fourth Amendment to the Blue Dolphin 2000 Stock Incentive Plan (incorporated by reference to Exhibit B filed with Blue Dolphin's Proxy Statement on Form DEFA on December 28, 2011, Commission File No. 000-15905)
10.5	Promissory Note between Lazarus Energy LLC as maker and Notre Dame Investors Inc. as Payee in the Principal Amount of $8,000,000 dated June 1, 2006 (incorporated by reference to Exhibit 10.6 filed with Blue Dolphin's Form 10-Q on March 31, 2012, Commission File No. 000-15905)

10.6**	Subordination Agreement dated June 3, 2015 by and among John H. Kissick and Sovereign Bank
10.7	First Amendment to Promissory Note by and between Lazarus Energy, LLC and John H. Kissick effective as of July 1, 2013 (incorporated by reference to Exhibit 10.1 filed with Blue Dolphin's Form 10-Q on November 14, 2013, Commission File No. 000-15905)
10.8	Second Amendment to Promissory Note by and between Lazarus Energy, LLC and John H. Kissick effective as of October 1, 2014 (incorporated by reference to Exhibit 10.48 filed with Blue Dolphin's Form 10-K on March 31, 2015, Commission File No. 000-15905)

Exhibits

10.9	Second Amendment to Promissory Note by and between Lazarus Energy, LLC and John H. Kissick effective as of October 1, 2014 (incorporated by reference to Exhibit 10.48 filed with Blue Dolphin's Form 10-K on March 31, 2015, Commission File No. 000-15905)
10.10	Loan Agreement among Sovereign Bank, Lazarus Energy, LLC and Jonathan Pitts Carroll, Sr., Blue Dolphin Energy Company, Lazarus Refining & Marketing, LLC, and Lazarus Energy Holdings dated June 22, 2015 (incorporated by reference to Exhibit 10.1 filed with Blue Dolphin's Form 8-K on June 26, 2015, Commission File No. 000-15905)
10.11	Promissory Note between Lazarus Energy, LLC and Sovereign Bank for the principal sum of $25,000,000 dated June 22, 2015 (incorporated by reference to Exhibit 10.2 filed with Blue Dolphin's Form 8-K on June 26, 2015, Commission File No. 000-15905)
10.12	Security Agreement of Lazarus Energy, LLC in favor of Sovereign Bank dated June 22, 2015 (incorporated by reference to Exhibit 10.3 filed with Blue Dolphin's Form 8-K on June 26, 2015, Commission File No. 000-15905)
10.13	Deed of Trust, Mortgage, Security Agreement, Assignment of Leases and Rents, Financing Statement and Fixture Filing for Lazarus Energy, LLC dated June 22, 2015 (incorporated by reference to Exhibit 10.4 filed with Blue Dolphin's Form 8-K on June 26, 2015, Commission File No. 000-15905)
10.14	Security Agreement of Lazarus Energy, LLC for the benefit of Lazarus Refining & Marketing, LLC dated June 22, 2015 (incorporated by reference to Exhibit 10.5 filed with Blue Dolphin's Form 8-K on June 26, 2015, Commission File No. 000-15905)
10.15	Loan and Security Agreement between Sovereign Bank and Lazarus Refining & Marketing, LLC dated June 22, 2015 (incorporated by reference to Exhibit 10.6 filed with Blue Dolphin's Form 8-K on June 26, 2015, Commission File No. 000-15905)
10.16	Pledge Agreement by Lazarus Refining & Marketing, LLC in favor of Sovereign Bank dated June 22, 2015 (incorporated by reference to Exhibit 10.8 filed with Blue Dolphin's Form 8-K on June 26, 2015, Commission File No. 000-15905)
10.17	Collateral Assignment executed by Blue Dolphin Pipe Line Company for the benefit of Sovereign Bank dated June 22, 2015 (incorporated by reference to Exhibit 10.9 filed with Blue Dolphin's Form 8-K on June 26, 2015, Commission File No. 000-15905)
10.18	Loan Agreement among Sovereign Bank, Lazarus Refining & Marketing, LLC, Jonathan Pitts Carroll, Sr., Blue Dolphin Energy Company, Lazarus Energy, LLC, and Lazarus Energy Holdings dated December 4, 2015 (incorporated by reference to Exhibit 10.1 filed with Blue Dolphin's Form 8-K on December 10, 2015, Commission File No. 000-15905)
10.19	Promissory Note between Lazarus Refining & Marketing, LLC and Sovereign Bank for the principal sum of $10,000,000 dated December 4, 2015 (incorporated by reference to Exhibit 10.2 filed with Blue Dolphin's Form 8-K on December 10, 2015, Commission File No. 000-15905)
10.20	Security Agreement of Lazarus Refining & Marketing, LLC in favor of Sovereign Bank dated December 4, 2015 (incorporated by reference to Exhibit 10.3 filed with Blue Dolphin's Form 8-K on December 10, 2015, Commission File No. 000-15905)
10.21	Deed of Trust, Mortgage, Security Agreement, Assignment of Leases and Rents, Financing Statement and Fixture Filing for Lazarus Refining & Marketing, LLC dated December 4, 2015 (incorporated by reference to Exhibit 10.4 filed with Blue Dolphin's Form 8-K on December 10, 2015, Commission File No. 000-15905)
10.22	Absolute Assignment of Leases and Rents dated December 4, 2015 (incorporated by reference to Exhibit 10.6 filed with Blue Dolphin's Form 8-K on December 10, 2015, Commission File No. 000-15905)
10.23	Indemnification Agreement dated December 4, 2015 (incorporated by reference to Exhibit 10.7 filed with Blue Dolphin's Form 8-K on December 10, 2015, Commission File No. 000-15905)
10.24	Pledge Agreement by Lazarus Energy Holdings, LLC in favor of Sovereign Bank dated December 4, 2015 (incorporated by reference to Exhibit 10.8 filed with Blue Dolphin's Form 8-K on December 10, 2015, Commission File No. 000-15905)
10.25	Collateral Assignment of Key Agreements dated December 4, 2015 (incorporated by reference to Exhibit 10.9 filed with Blue Dolphin's Form 8-K on December 10, 2015, Commission File No. 000-15905)
10.26	First Amendment to Lazarus Energy, LLC Loan Agreement and Loan Documents dated December 4, 2015 (incorporated by reference to Exhibit 10.10 filed with Blue Dolphin's Form 8-K on December 10, 2015, Commission File No. 000-15905)
10.27	First Amendment to Lazarus Energy, LLC Deed of Trust, Mortgage, Security Agreement, Assignment of Leases and Rents, Financing Statement and Fixture Filing dated December 4, 2015 (incorporated by reference to Exhibit 10.11 filed with Blue Dolphin's Form 8-K on December 10, 2015, Commission File No. 000-15905)

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Exhibits

10.28	Loan and Security Agreement by and between Lazarus Energy Holdings, LLC and Blue Dolphin Pipe Line Company dated August 15, 2016 (incorporated by reference to Exhibit 10.1 filed with Blue Dolphin's Form 8-K on August 19, 2016, Commission File No. 000-15905)
10.29	Promissory Note by and between Lazarus Energy Holdings, LLC and Blue Dolphin Pipe Line Company dated August 15, 2016 (incorporated by reference to Exhibit 10.2 filed with Blue Dolphin's Form 8-K on August 19, 2016, Commission File No. 000-15905)
10.30	Deed of Trust, Mortgage, Security Agreement, Assignment of Leases and Rents, Financing Statement and Fixture Filing for Blue Dolphin Pipe Line Company dated August 15, 2016 (incorporated by reference to Exhibit 10.3 filed with Blue Dolphin's Form 8-K on August 19, 2016, Commission File No. 000-15905)
10.31	Amended and Restated Promissory Note dated March 31, 2017, of Blue Dolphin Energy Company in favor of Ingleside Crude, LLC (incorporated by reference to Exhibit 10.2 filed with Blue Dolphin's Form 10-Q on May 15, 2017, Commission File No. 000-15905)
10.32	Amended and Restated Promissory Note dated March 31, 2017, of Blue Dolphin Energy Company in favor of Lazarus Capital, LLC (Jonathan Carroll) (incorporated by reference to Exhibit 10.3 filed with Blue Dolphin's Form 10-Q on May 15, 2017, Commission File No. 000-15905)
10.33	Amended and Restated Promissory Note dated June 30, 2017, of Blue Dolphin Energy Company in favor of Lazarus Energy Holdings, LLC (incorporated by reference to Exhibit 10.1 filed with Blue Dolphin's Form 10-Q on October 12, 2017, Commission File No. 000-15905)
10.34	Notice from Veritex Community Bank to Lazarus Energy, LLC, Blue Dolphin Energy Company, Lazarus Refining & Marketing, LLC, Lazarus Energy Holdings, LLC, Lazarus Marine Terminal I, LLC and Jonathan Pitts Carroll, Sr. dated April 30, 2019 (incorporated by reference to Exhibit 10.7 filed with Blue Dolphin's Form 10-Q on August 14, 2019, Commission File No. 000-15905)
10.35	Loan Authorization and Agreement between Blue Dolphin Energy Company and the Small Business Administration effective May 4, 2021 (incorporated by reference to Exhibit 10.1 filed with Blue Dolphin's Form 10-Q on August 17, 2021, Commission File No. 000-15905).
10.36	Loan Authorization and Agreement between Blue Dolphin Energy Company and the Small Business Administration dated May 11, 2021 (incorporated by reference to Exhibit 10.1 filed with Blue Dolphin's Form 8-K on May 17, 2021, Commission File No. 000-15905).
10.37	Loan Agreement between Greater Nevada Credit Union, Nixon Product Storage, LLC, and Guarantors (as defined therein) dated September 20, 2021 (incorporated by reference to Exhibit 10.52 filed with Blue Dolphin's Form 10-K on April 1, 2022, Commission File No. 000-15905).
10.38	Guaranteed Note between Nixon Product Storage, LLC and Greater Nevada Credit Union dated September 20, 2021. (incorporated by reference to Exhibit 10.53 filed with Blue Dolphin's Form 10-K on April 1, 2022, Commission File No. 000-15905).
10.39	Non-Guaranteed Note between Nixon Product Storage, LLC and Greater Nevada Credit Union dated September 20, 2021. (incorporated by reference to Exhibit 10.54 filed with Blue Dolphin's Form 10-K on April 1, 2022, Commission File No. 000-15905).
10.40	1st Loan Modification of Note between Blue Dolphin Energy Company and the Small Business Administration dated February 18, 2022. (incorporated by reference to Exhibit 10.55 filed with Blue Dolphin's Form 10-K on April 1, 2022, Commission File No. 000-15905).
10.41	Forbearance Agreement dated November 18, 2022 among Lazarus Energy LLC, Lazarus Refining & Marketing LLC, Blue Dolphin Energy Company, Lazarus Energy Holdings LLC, Jonathan Carroll and Veritex Community Bank (incorporated by reference to Exhibit 10.1 filed with Blue Dolphin's Form 8-K on November 25, 2022, Commission File No. 000-15905).
10.42**	Second Amended and Restated Operating Agreement effective as of April 1, 2023 by and between Lazarus Energy Holdings, LLC, Blue Dolphin Energy Company, Lazarus Energy, LLC, Lazarus Refining & Marketing, LLC, Nixon Product Storage, LLC, Blue Dolphin Pipe Line Company, Blue Dolphin Petroleum Company, and Blue Dolphin Services Co.
10.43**	Guaranty Fee Agreement dated January 1, 2023 between Blue Dolphin Energy Company and Jonathan P. Carroll.
10.44**	Guaranty Fee Agreement dated January 1, 2023 between Nixon Product Storage, LLC and Jonathan P. Carroll.
10.45**	Amended and Restated Guaranty Fee Agreement dated January 1, 2023 between Lazarus Energy, LLC and Jonathan P. Carroll.

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Exhibits

10.46**	Amended and Restated Guaranty Fee Agreement dated January 1, 2023 between Lazarus Refining & Marketing, LLC and Jonathan P. Carroll.
14.1	Code of Ethics applicable to the Chairman, Chief Executive Officer and Senior Financial Officer (incorporated by reference to Exhibit 14.1 filed with Blue Dolphin's Form 10-KSB on March 25, 2005, Commission File No. 000-15905)
21.1**	List of Subsidiaries of Blue Dolphin
23.1**	Consent of UHY LLP
31.1**	Jonathan P. Carroll Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to section 302 of the Sarbanes-Oxley Act of 2002
32.1**	Jonathan P. Carroll Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002

99.1	Amended and Restated Audit Committee Charter as reviewed by the Board of Directors of Blue Dolphin on November 15, 2018 (incorporated by reference to Appendix A filed with Blue Dolphin's Proxy Statement on Form DEF 14A on November 15, 2018, Commission File No. 000-15905)
99.2	Compensation Committee Charter as reviewed by the Board of Directors of Blue Dolphin on November 15, 2018 (incorporated by reference to Appendix B filed with Blue Dolphin's Proxy Statement on Form DEF 14A on November 15, 2018, Commission File No. 000-15905)
101.INS**	XBRL Instance Document
101.SCH**	XBRL Taxonomy Schema Document
101.CAL**	XBRL Calculation Linkbase Document
101.LAB**	XBRL Label Linkbase Document
101.PRE**	XBRL Presentation Linkbase Document
101.DEF**	XBRL Definition Linkbase Document

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* Management Compensation Plan
** Filed herewith

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BLUE DOLPHIN ENERGY COMPANY
(Registrant)

April 3, 2023

By: /s/ JONATHAN P. CARROLL
Jonathan P. Carroll
Chief Executive Officer, President,
Assistant Treasurer and Secretary
(Principal Executive Officer, Principal Financial Officer,
and Principal Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ JONATHAN P. CARROLL Jonathan P. Carroll	Chairman of the Board, Chief Executive Officer, President, Assistant Treasurer and Secretary (Principal Executive Officer, Principal Financial Officer, and Principal Accounting Officer)	April 3, 2023
/s/ RYAN A. BAILEY Ryan A. Bailey	Director	April 3, 2023
/s/ AMITAV MISRA Amitav Misra	Director	April 3, 2023
/s/ CHRISTOPHER T. MORRIS Christopher T. Morris	Director	April 3, 2023
/s/ HERBERT N. WHITNEY Herbert N. Whitney	Director	April 3, 2023

SUBORDINATION AGREEMENT

THIS SUBORDINATION AGREEMENT (the "Agreement") is made as of June 3, 2015, by and between **John H. Kissick** ("Subordinated Creditor"), and **Sovereign Bank**, as Lender ("Lender").

Recitals

A. Lazarus Energy LLC, a Delaware limited liability company ("Lazarus"), is entering into that certain Loan Agreement dated __________, 2015, by and between Lazarus, as borrower, and Lender (as amended, restated, supplemented or otherwise modified from time to time, the "Loan Agreement").

B. Subordinated Creditor has extended loans or other credit accommodations to Lazarus, and/or may extend loans or other credit accommodations to Lazarus from time to time.

C. To induce Lender to make loans or advances to Lazarus and, at any time or from time to time, at Lender's option, to make such further extensions of credit, or other accommodations to or for the account of Lazarus, or to grant such renewals or extension of any such loans, advances, extensions of credit, or other accommodations as Lender may deem advisable, Subordinated Creditor is willing to subordinate: (i) all of Lazarus' indebtedness and obligations to Subordinated Creditor (including, without limitation, principal, premium (if any), interest, fees, charges, expenses, costs, professional fees and expenses, and reimbursement obligations), whether presently existing or arising in the future (the "Subordinated Debt") to all of Lazarus' indebtedness and obligations to Lender; and (ii) all of Subordinated Creditor's security interests and liens, if any, to all of Lender's security interests and liens, if any, in Lazarus' property.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. Subordinated Creditor subordinates to Lender any security interest or lien that Subordinated Creditor may have in any property of Lazarus. Notwithstanding the respective dates of attachment or perfection of the security interests or liens of Subordinated Creditor and the security interests or liens of Lender, all now existing and hereafter arising security interests and liens of Lender in any property of Lazarus and all proceeds thereof (the "Collateral"), shall at all times be senior to the security interests and liens of Subordinated Creditor. Subordinated Creditor hereby (a) acknowledges and consents to (i) Lazarus granting to Lender a security interest and lien in the Collateral, (ii) Lender filing any and all financing statements and other documents as deemed necessary by Lender in order to perfect Lender's security interest and lien in the Collateral, and (iii) the entering into of the Loan Agreement and all documents in connection therewith by Lazarus, including the Loan Documents (as defined in the Loan Agreement and used herein with the same meaning), (b) acknowledges and agrees that the Senior Obligations, the entering into of the Loan Agreement and all Loan Documents by Lazarus, and the security interest and lien granted by Lazarus to Lender in the Collateral shall be permitted under the provisions of the Subordinated Debt documents (notwithstanding any provision of the Subordinated Debt documents to the contrary), (c) acknowledges, agrees and covenants that Subordinated Creditor shall not contest, challenge or dispute the validity, attachment, perfection, priority or enforceability of Lender's security interest and lien in the Collateral, or the validity, priority or enforceability of the Senior Obligations, and (d) acknowledges and agrees that the provisions of this Agreement will apply fully and unconditionally even in the event that Lender's security interest or lien in the Collateral (or any portion thereof) shall be unperfected.

2. All Subordinated Debt is subordinated in right of payment to all obligations of Lazarus to Lender now existing or hereafter arising, including, without limitation, principal, interest, premium and any other amounts due or to become due under the Loan Documents, together with all costs of collecting

such obligations (including attorneys' fees), including, without limitation, all obligations under any agreement in connection with the provision by Lender to Lazarus of products and/or credit services facilities, including, without limitation, any letters of credit, cash management services (including, without limitation, merchant services, direct deposit of payroll, business credit cards, and check cashing services), interest rate swap arrangements, and foreign exchange services, and all interest accruing after the commencement by or against Lazarus of any bankruptcy, reorganization or similar proceeding (such obligations, collectively, the "Senior Obligations").

3. Unless Lender shall have consented thereto in writing, Subordinated Creditor will not demand, accept or receive from Lazarus (and Lazarus will not pay to Subordinated Creditor) all or any part of the Subordinated Debt, by way of payment, prepayment, setoff, lawsuit or otherwise, nor will Subordinated Creditor exercise any remedy with respect to any property of Lazarus, nor will Subordinated Creditor accelerate the Subordinated Debt, or commence, or cause to commence, prosecute or participate in any administrative, legal or equitable action against Lazarus, until such time as (a) the Senior Obligations has been fully paid in cash, (b) Lender no longer has has any commitment or obligation to further advance funds or otherwise provide financing to Lazarus, and (c) all Loan Documents are terminated. Nothing in the foregoing paragraph shall prohibit Subordinated Creditor from converting all or any part of the Subordinated Debt into equity securities of Lazarus; provided that, if such securities have any call, put or other conversion features that would obligate Lazarus to declare or pay dividends, make distributions, or otherwise pay any money or deliver any other securities or consideration to the holder, Subordinated Creditor hereby agrees that Lazarus may not declare, pay or make such dividends, distributions or other payments to Subordinated Creditor, and Subordinated Creditor shall not accept any such dividends, distributions or other payments.

4. Subordinated Creditor shall promptly deliver to Lender in the form received (except for endorsement or assignment by Subordinated Creditor where required by Lender) for application to the Senior Obligations any payment, distribution, security or proceeds received by Subordinated Creditor with respect to the Subordinated Debt other than in accordance with this Agreement.

5. In the event of Lazarus' insolvency, reorganization or any case or proceeding under any bankruptcy or insolvency law or laws relating to the relief of debtors, including, without limitation, any voluntary or involuntary bankruptcy, insolvency, receivership or other similar statutory or common law proceeding or arrangement involving Lazarus, the readjustment of its liabilities, any assignment for the benefit of its creditors or any marshalling of its assets or liabilities (each, an "Insolvency Proceeding"), (a) this Agreement shall remain in full force and effect in accordance with Section 510(a) of the United States Bankruptcy Code, (b) the Collateral shall include, without limitation, all Collateral arising during or after any such Insolvency Proceeding, and (c) Lender's claims against Lazarus and the estate of Lazarus shall be paid in full before any payment is made to Subordinated Creditor.

6. Subordinated Creditor shall give Lender prompt written notice of the occurrence of any default or event of default under any document, instrument or agreement evidencing or relating to the Subordinated Debt, and shall, simultaneously with giving any notice of default to Lazarus, provide Lender with a copy of any notice of default given to Lazarus. Subordinated Creditor acknowledges and agrees that any default or event of default under the Subordinated Debt documents shall at Lender's option be deemed to be a default and an event of default under the Loan Documents.

7. Until the Senior Obligations have been fully paid in cash and Lender's agreements to lend or otherwise advance any funds to Lazarus have been terminated, Subordinated Creditor irrevocably appoints Lender as Subordinated Creditor's attorney-in-fact, and grants to Lender a power of attorney with full power of substitution, in the name of Subordinated Creditor or in the name of Lender, without

notice to Subordinated Creditor, to perform at the Lender's option the following acts in any Insolvency Proceeding involving Lazarus:

a) To file the appropriate claim or claims in respect of the Subordinated Debt on behalf of Subordinated Creditor if Subordinated Creditor does not do so prior to 30 days before the expiration of the time to file claims in such Insolvency Proceeding and if Lender elects to file such claim or claims; and

b) To accept or reject any plan of reorganization or arrangement on behalf of Subordinated Creditor and to otherwise vote Subordinated Creditor's claims in respect of any Subordinated Debt in any manner that Lender deems appropriate for the enforcement of Lender's rights hereunder.

In addition to and without limiting the foregoing: (x) until the Senior Obligations has been fully paid in cash and the Lender's commitments to make loans or advances to Lazarus have been terminated, Subordinated Creditor shall not commence or join in any involuntary bankruptcy petition or similar judicial proceeding against Lazarus, and (y) if an Insolvency Proceeding occurs: (i) Subordinated Creditor shall not assert, without the prior written consent of Lender, any claim, motion, objection or argument in respect of the Collateral in connection with any Insolvency Proceeding which could otherwise be asserted or raised in connection with such Insolvency Proceeding, including, without limitation, any claim, motion, objection or argument seeking adequate protection or relief from the automatic stay in respect of the Collateral, (ii) Lender may consent to the use of cash collateral on such terms and conditions and in such amounts as it shall in good faith determine without seeking or obtaining the consent of Subordinated Creditor as (if applicable) holder of an interest in the Collateral, (iii) if use of cash collateral by Lazarus is consented to by Lender in accordance with clause (ii) above, Subordinated Creditor shall not oppose such use of cash collateral on the basis that Subordinated Creditor's interest in the Collateral (if any) is impaired by such use or inadequately protected by such use, or on any other ground, and (iv) Subordinated Creditor shall not object to, or oppose, any sale or other disposition of any assets comprising all or part of the Collateral, free and clear of security interests, liens and claims of any party, including Subordinated Creditor, under Section 363 of the United States Bankruptcy Code or otherwise, on the basis that the interest of Subordinated Creditor in the Collateral (if any) is impaired by such sale or inadequately protected as a result of such sale, or on any other ground (and, if requested by Lender, Subordinated Creditor shall affirmatively and promptly consent to such sale or disposition of such assets), if Lender has consented to, or supports, such sale or disposition of such assets.

8. Subordinated Creditor represents and warrants that Subordinated Creditor has provided Lender with true and correct copies of all of the documents evidencing or relating to the Subordinated Debt. Subordinated Creditor shall immediately affix a legend to the instruments evidencing the Subordinated Debt stating that the instruments are subject to the terms of this Agreement.

9. No amendment of the documents evidencing or relating to the Subordinated Debt shall directly or indirectly modify the provisions of this Agreement in any manner which might terminate or impair the subordination of the Subordinated Debt or the subordination of the security interest or lien that Subordinated Creditor may have in any property of Lazarus. By way of example, such instruments shall not be amended to (a) increase the rate of interest with respect to the Subordinated Debt, or (b) accelerate the payment of the principal or interest or any other portion of the Subordinated Debt. Lender shall have the sole and exclusive right to restrict or permit, or approve or disapprove, the sale, transfer or other disposition of property of Lazarus except in accordance with the terms of the Loan Documents. Upon written notice from Lender to Subordinated Creditor of Lender's agreement to release its lien on all or any portion of the Collateral in connection with the sale, transfer or other disposition thereof by Lender (or by Lazarus with consent of Lender), Subordinated Creditor shall be deemed to have also,

automatically and simultaneously, released its lien on the Collateral, and Subordinated Creditor shall upon written request by Lender, immediately take such action as shall be necessary or appropriate to evidence and confirm such release. All proceeds resulting from any such sale, transfer or other disposition shall be applied first to the Senior Obligations until payment in full thereof, with the balance, if any, to the Subordinated Debt, or to any other entitled party. If Subordinated Creditor fails to release its lien as required hereunder, Subordinated Creditor hereby appoints Lender as attorney in fact for Subordinated Creditor with full power of substitution to release Subordinated Creditor's liens as provided hereunder. Such power of attorney being coupled with an interest shall be irrevocable.

10. All necessary action on the part of Subordinated Creditor, its officers, directors, partners, members and shareholders, as applicable, necessary for the authorization of this Agreement and the performance of all obligations of Subordinated Creditor hereunder has been taken. This Agreement constitutes the legal, valid and binding obligation of Subordinated Creditor, enforceable against Subordinated Creditor in accordance with its terms. The execution, delivery and performance of and compliance with this Agreement by Subordinated Creditor will not (a) result in any material violation or default of any term of any of Subordinated Creditor's charter, formation or other organizational documents (such as Articles or Certificate of Incorporation, bylaws, partnership agreement, operating agreement, etc.) or (b) violate any material applicable law, rule or regulation.

11. If, at any time after payment in full of the Senior Obligations any payments of the Senior Obligations must be disgorged by Lender for any reason (including, without limitation, any Insolvency Proceeding), this Agreement and the relative rights and priorities set forth herein shall be reinstated as to all such disgorged payments as though such payments had not been made and Subordinated Creditor shall immediately pay over to Lender all payments received with respect to the Subordinated Debt to the extent that such payments would have been prohibited hereunder. At any time and from time to time, without notice to Subordinated Creditor, Lender may take such actions with respect to the Senior Obligations as Lender, in its sole discretion, may deem appropriate, including, without limitation, terminating advances to Lazarus, increasing principal, interest, premium or fees, extending maturity or the time of payment, increasing applicable interest rates, loan availability or lending commitment, renewing, compromising or otherwise amending the terms of any documents affecting the Senior Obligations and any collateral securing the Senior Obligations, and enforcing or failing to enforce any rights against Lazarus or any other person. No such action or inaction shall impair or otherwise affect Lender's rights hereunder. Subordinated Creditor waives the benefits, if any, of any statutory or common law rule that may permit a subordinating creditor to assert any defenses of a surety or guarantor, or that may give the subordinating creditor the right to require a senior creditor to marshal assets, and Subordinated Creditor agrees that it shall not assert any such defenses or rights.

12. This Agreement shall bind any successors or assignees of Subordinated Creditor and shall benefit any successors or assigns of Lender, provided, however, Subordinated Creditor agrees that, prior and as conditions precedent to Subordinated Creditor assigning all or any portion of the Subordinated Debt: (a) Subordinated Creditor shall give Lender prior written notice of such assignment, and (b) such successor or assignee, as applicable, shall execute a written agreement whereby such successor or assignee expressly agrees to assume and be bound by all terms and conditions of this Agreement with respect to Subordinated Creditor. This Agreement shall remain effective until terminated in writing by Lender. This Agreement is solely for the benefit of Subordinated Creditor and Lender and not for the benefit of Lazarus or any other party.

13. Subordinated Creditor hereby agrees to execute such documents and/or take such further action as Lender may at any time or times reasonably request in order to carry out the provisions and intent of this Agreement, including, without limitation, ratifications and confirmations of this Agreement from time to time hereafter, as and when requested by Lender.

14. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

15. THIS GUARANTY SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF TEXAS WITHOUT REGARD TO PRINCIPLES THEREOF REGARDING CONFLICT OF LAWS. SUBORDINATED CREDITOR HEREBY IRREVOCABLY AGREES THAT ANY LEGAL ACTION OR PROCEEDING WITH RESPECT TO THIS AGREEMENT OR ANY OF THE AGREEMENTS, DOCUMENTS OR INSTRUMENTS DELIVERED IN CONNECTION HEREWITH MAY BE BROUGHT IN THE CIRCUIT COURT OF DALLAS COUNTY, TEXAS, OR, AT LENDER'S OPTION, THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF TEXAS (PROVIDED THAT SUBORDINATED CREDITOR ACKNOWLEDGES THAT ANY APPEALS FROM THOSE COURTS MAY HAVE TO BE HEARD BY A COURT LOCATED OUTSIDE OF THE STATE OF TEXAS), AND, BY EXECUTION AND DELIVERY HEREOF, SUBORDINATED CREDITOR ACCEPTS AND CONSENTS TO, GENERALLY AND UNCONDITIONALLY, THE JURISDICTION OF THE AFORESAID COURTS AND AGREES THAT SUCH JURISDICTION SHALL BE EXCLUSIVE, UNLESS WAIVED BY LENDER IN WRITING, WITH RESPECT TO ANY ACTION OR PROCEEDING BROUGHT BY SUBORDINATED CREDITOR AGAINST LENDER. NOTHING HEREIN SHALL LIMIT THE RIGHT OF LENDER TO BRING PROCEEDINGS AGAINST SUBORDINATED CREDITOR IN THE COURTS OF ANY OTHER COMPETENT JURISDICTION. SUBORDINATED CREDITOR HEREBY WAIVES ANY OBJECTION WHICH SUBORDINATED CREDITOR MAY HAVE BASED UPON LACK OF PERSONAL JURISDICTION, IMPROPER VENUE OR <u>FORUM</u> <u>NON</u> <u>CONVENIENS</u> AND HEREBY CONSENTS TO THE GRANTING OF SUCH LEGAL OR EQUITABLE RELIEF AS IS DEEMED APPROPRIATE BY SUCH COURT. SUBORDINATED CREDITOR WAIVES ITS RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT OR ANY OF THE TRANSACTIONS CONTEMPLATED HEREIN.

16. THIS AGREEMENT REPRESENTS THE FINAL AGREEMENT BETWEEN THE PARTIES WITH RESPECT TO THE SUBJECT MATTER HEREOF AND MAY NOT BE CONTRADICTED BY EVIDENCE OF PRIOR CONTEMPORANEOUS OR SUBSEQUENT ORAL AGREEMENTS OF THE PARTIES. THERE ARE NO UNWRITTEN ORAL AGREEMENTS BETWEEN THE PARTIES.

17. Subordinated Creditor is not relying on any representations by Lender or Lazarus in entering into this Agreement, and Subordinated Creditor has kept and will continue to keep itself fully appraised of the financial and other condition of Lazarus. This Agreement may be amended only by written instrument signed by Subordinated Creditor and Lender.

[Signature page follows.]

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the date first above written.

"Subordinated Creditor"

JOHN H. KISSICK

Notice Address:

2000 Avenue of the Stars
12th Floor
Los Angeles, CA 90067

Facsimile: (310) 201-4170
Email: kissick@aresmgmt.com

SECOND AMENDED AND RESTATED OPERATING AGREEMENT

THIS SECOND AMENDED AND RESTATED OPERATING AGREEMENT (this "**Second Amended and Restated Agreement**") is effective as of April 1, 2023 (the "**Effective Date**"), by and between Lazarus Energy Holdings, LLC, a Delaware limited liability company ("**LEH**"), Blue Dolphin Energy Company, a Delaware corporation ("**Blue Dolphin**"), Lazarus Energy, LLC, a Delaware limited liability company ("**LE**"), Lazarus Refining & Marketing, LLC, a Delaware limited liability company ("**LRM**"), Nixon Product Storage, LLC, a Delaware limited liability company ("**NPS**"), Blue Dolphin Pipe Line Company, a Delaware corporation ("**BDPL**"), Blue Dolphin Petroleum Company, a Delaware corporation ("**BDPC**") and Blue Dolphin Services Co., a Texas corporation ("**BDSC**"). (LEH, Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and BDSC are collectively referred to herein as the "**Parties**").

WITNESSETH:

WHEREAS, Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and BDSC desire to engage LEH to manage and operate the companies thereto, and LEH has previously provided management services in the areas of operations and management of the business of certain of the companies thereto (collectively the "Services"); and

WHEREAS, in anticipation of the expiration of the Amended and Restated Operating Agreement on April 1, 2023, by and among LEH, LE and Blue Dolphin, the parties agree to renewal terms.

WHEREAS, LEH successfully provided Services for the period April 1, 2017 through April 1, 2020.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the Parties hereto agree as follows:

1. Commencing on the Effective Date and throughout the Term of this Amended and Restated Agreement, LEH agrees to perform the Services in the interest of Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and BDSC, subject to the terms and conditions stated herein. The Services shall be performed on a continuing basis without any further specific requests or instructions.

2. For the purposes of certainty, it is understood and agreed that the term "Services" does not include any activities that can be exercised by LEH as a shareholder and the Services shall be provided in a way that is independent of any such shareholding.

3. Quality. The Services provided by LEH hereunder shall be provided in a good and workmanlike manner in accordance with prevailing industry standards.

4. Compensation. In consideration for the Services hereunder:

(a) Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and BDSC shall reimburse LEH at cost for all direct expenses, either paid directly by LEH or financed with LEH's credit card. Amounts payable to LEH shall be invoiced by LEH weekly but may be reimbursed sooner.

(b) Blue Dolphin shall also pay to LEH a management fee equal to 5% of all consolidated operating costs, excluding crude costs, depreciation, amortization and interest (the "**Management Fee**").

5. Term. The "Term" of this Amended and Restated Agreement shall begin on the Effective Date and shall expire upon the earliest to occur of the following:

(a) Upon the first anniversary of the Effective Date, which termination date shall be April 1, 2024.

(b) Upon written notice of either party upon the material breach of this Amended and Restated Agreement by the other party.

(b) Upon 90 days' notice by the Board of Directors of Blue Dolphin (the "**Board**") if the Board determines that this Amended and Restated Agreement is not in the best interest of Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and/or BDSC.

The termination of this Amended and Restated Agreement shall not affect the survival of Section 6 of this Amended and Restated Agreement.

6. Indemnification.

(a) LEH will indemnify, defend and hold harmless Blue Dolphin, LE, LRM, NPS, BDPL, BDPC, BDSC, and their affiliates, and their respective officers, directors and employees, from and against any claim or liability arising from the negligence or willful misconduct of LEH, or from any injury suffered or alleged to be suffered by any employee of LEH.

(b) Blue Dolphin, LE, LRM, NPS, BDPL, BDPC and BDSC will indemnify, defend and hold harmless LEH, its affiliates, and their respective officers, directors and employees, from and against any claim or liability arising from the negligence or willful misconduct of Blue Dolphin, LE, LRM, NPS, BDPL, BDPC or BDSC.

7. Remedies. If any legal action or other proceeding is brought for the enforcement of this Amended and Restated Agreement, or because of an alleged dispute, breach, default or misrepresentation in connection with any of the provisions of this Amended and Restated Agreement, the successful or prevailing party or parties shall be entitled to recover reasonable attorneys' fees and other costs incurred in that action or proceeding in addition to any other relief to which it or he may be entitled at law or equity.

8. Successors. This Amended and Restated Agreement shall be binding upon each of the Parties upon their execution, and inure to the benefit of the Parties hereto and their successors and assigns. Any assignee whatsoever will be bound by the obligations of the assigning party under this Amended and Restated Agreement, and any assignment shall not diminish the liability or obligation of the assignor under the terms of this Amended and Restated Agreement unless otherwise agreed.

9. Severability. In the event that any one or more of the provisions contained in this Amended and Restated Agreement or in any other instrument referred to herein, shall, for any reason, be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Amended and Restated Agreement or any such other instrument.

10. Paragraph Headings. The paragraph headings used herein are descriptive only and shall have no legal force or effect whatsoever.

11. Gender. Whenever the context so requires, the masculine shall include the feminine and neuter, and the singular shall include the plural and conversely.

12. Governing Law. This Amended and Restated Agreement shall be governed by and construed in accordance with the laws of the state of Texas applicable to agreements and contracts executed and to be wholly performed there, without giving effect to the conflicts of law principles thereof. Venue for any action brought in connection herewith shall lie in Harris County, Texas.

13. Remedies. In the event of any action, dispute or litigation from the Parties hereto relating to the interpretation or enforcement of this Amended and Restated Agreement or otherwise relating to the subject matter hereof, the prevailing party shall be entitled to recover reasonable attorneys' fees and court costs.

14. Multiple Counterparts. This Amended and Restated Agreement may be executed in multiple counterparts, each of which shall be deemed an original.

15. Waiver. Any waiver by either party to be enforceable must be in writing and no waiver by either party shall constitute a continuing waiver.

16. Cross References. References in this Amended and Restated Agreement to Articles, Sections, Exhibits, or Schedules shall be deemed to be references to Articles, Sections, Exhibits, and Schedules of this Amended and Restated Agreement unless the context specifically and expressly requires otherwise.

17. Entire Agreement. This Amended and Restated Agreement and the other agreements referred to herein set forth the entire understanding of the Parties hereto relating to the subject matter hereof and thereof and supersede all prior agreements and understandings among or between any of the Parties relating to the subject matter hereof and thereof.

[Remainder of page intentionally left blank; signature page to follow.]

IN WITNESS WHEREOF, the Parties have executed this Amended and Restated Agreement as of the date and year first set forth above.

BLUE DOLPHIN ENERGY COMPANY

Jonathan Carroll (Mar 14, 2023 09:54 CDT)

Jonathan P. Carroll
President

LAZARUS ENERGY, LLC

Jonathan Carroll (Mar 14, 2023 09:54 CDT)

Jonathan P. Carroll
President

LAZARUS REFINING & MARKETING, LLC

Jonathan Carroll (Mar 14, 2023 09:54 CDT)

Jonathan P. Carroll
President

NIXON PRODUCT STORAGE, LLC

Jonathan Carroll (Mar 14, 2023 09:54 CDT)

Jonathan P. Carroll
President

BLUE DOLPHIN PIPE LINE COMPANY

Jonathan Carroll (Mar 14, 2023 09:54 CDT)

Jonathan P. Carroll
President

BLUE DOLPHIN PETROLEUM COMPANY

Jonathan Carroll (Mar 14, 2023 09:54 CDT)

Jonathan P. Carroll
President

BLUE DOLPHIN SERVICES CO.

Jonathan Carroll (Mar 14, 2023 09:54 CDT)

Jonathan P. Carroll
President

LAZARUS ENERGY HOLDINGS, LLC

Jonathan Carroll (Mar 14, 2023 09:54 CDT)

Jonathan P. Carroll
Managing Member

Amended & Restated Operating Agmt LEH & Blue Dolphin Subs 4-1-23

Final Audit Report 2023-03-14

Created:	2023-03-14
By:	Ty Graham (tylermurrellgraham@gmail.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAdaa00bn880rlQar5a2-FXtQYX3uYfg6M

"Amended & Restated Operating Agmt LEH & Blue Dolphin Sub s 4-1-23" History

- Document created by Ty Graham (tylermurrellgraham@gmail.com)
  2023-03-14 - 2:41:25 PM GMT- IP address: 99.1.46.45

- Document emailed to Jonathan Carroll (jcarroll@lazarusenergy.com) for signature
  2023-03-14 - 2:52:07 PM GMT

- Email viewed by Jonathan Carroll (jcarroll@lazarusenergy.com)
  2023-03-14 - 2:53:32 PM GMT- IP address: 69.147.86.138

- Document e-signed by Jonathan Carroll (jcarroll@lazarusenergy.com)
  Signature Date: 2023-03-14 - 2:54:09 PM GMT - Time Source: server- IP address: 108.250.11.161

- Agreement completed.
  2023-03-14 - 2:54:09 PM GMT

GUARANTY FEE AGREEMENT

THIS GUARANTY FEE AGREEMENT (this "**Agreement**") is made as of January 1, 2023 (the "**Effective Date**"), by and between Jonathan P. Carroll ("Guarantor") and Blue Dolphin Energy Company, a Delaware corporation ("BDEC"). Guarantor and BDEC are sometimes referred to herein as the "**Parties**".

WHEREAS, BDEC entered a Loan Authorization and Agreement (the "**Loan Agreement**") dated May 4, 2021, with the Small Business Administration ("**Lender**") as evidenced by that certain Note of even date with the Loan Agreement, in the original principal sum of FIVE HUNDRED THOUSAND AND 00/100 DOLLARS ($500,000.00), collectively referred to herein as (the "**Note**");

WHEREAS, as a condition precedent to Lender's obligations to extend credit to BDEC under the Loan Agreement, Lender required the execution and delivery of an unconditional guarantee as security for the obligations of BDEC under the Loan Agreement and Note;

WHEREAS, BDEC entered into an Amended Loan Authorization and Agreement (as amended, restated, supplemented or otherwise modified from time to time, the "**Amended Loan Agreement**") dated February 18, 2022, with Lender as evidenced by that certain 1st Modification of Note of even date with the Amended Loan Agreement, in the revised principal sum of TWO MILLION AND 00/100 DOLLARS ($1,500,000.00), collectively referred to herein as (the "**Amended "Note**");

WHEREAS, as a condition precedent to Lender's obligations to extend credit to BDEC under the Amended Loan Agreement, Lender required the execution and delivery of an amended unconditional guarantee as security for the obligations of BDEC under the Amended Loan Agreement and Amended Note; and

WHEREAS, Guarantor entered into an Unconditional Guarantee of even date with the Loan Agreement and Note and an Amended Unconditional Guarantee (as amended, restated, supplemented or otherwise modified from time to time, the "**Amended Guarantee**") of even date with the Amended Loan Agreement and Amended Note in favor of Lender to secure BDEC's obligations under the Amended Loan Agreement and Amended Note.

NOW, THEREFORE, in consideration of the Amended Guarantee and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by BDEC, the Parties agree as follows:

1. Payment of Fee. BDEC shall pay Guarantor or assignee a fee in an amount equal to two percent (2.00%) per annum (the "**Guaranty Fee**"), paid monthly, of the outstanding principal balance owed under the Amended Loan Agreement (the "**Guaranty Fee Basis**"). Amounts payable to Guarantor as the Guaranty Fee shall be paid in cash at the end of each calendar month.

2. Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of Texas without reference to any conflict of law provision.

3. Counterparts. This Agreement may be executed in multiple counterparts, including counterparts transmitted by facsimile, each of which will be deemed an original, but both of which together will constitute one and the same instrument.

[Remainder of page intentionally left blank; signature page to follow.]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

NIXON PRODUCT STORAGE, LLC

By: Jonathan Carroll (Mar 14, 2023 10:05 CDT)
Jonathan P. Carroll

JONATHAN P. CARROLL

By: Jonathan Carroll (Mar 14, 2023 10:05 CDT)
Jonathan P. Carroll

BDEC Guaranty Fee Agreement $2M 1-1-23

Final Audit Report 2023-03-14

Created:	2023-03-14
By:	Ty Graham (tylermurrellgraham@gmail.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAYsUqcu2klOgnGP33aZn147LxZmhTWOTf

"BDEC Guaranty Fee Agreement $2M 1-1-23" History

Document created by Ty Graham (tylermurrellgraham@gmail.com)
2023-03-14 - 3:03:17 PM GMT- IP address: 99.1.46.45

Document emailed to Jonathan Carroll (jcarroll@lazarusenergy.com) for signature
2023-03-14 - 3:04:43 PM GMT

Email viewed by Jonathan Carroll (jcarroll@lazarusenergy.com)
2023-03-14 - 3:05:05 PM GMT- IP address: 69.147.87.121

Document e-signed by Jonathan Carroll (jcarroll@lazarusenergy.com)
Signature Date: 2023-03-14 - 3:05:36 PM GMT - Time Source: server- IP address: 108.250.11.161

Agreement completed.
2023-03-14 - 3:05:36 PM GMT

GUARANTY FEE AGREEMENT

THIS GUARANTY FEE AGREEMENT (this "**Agreement**") is made as of January 1, 2023 (the "**Effective Date**"), by and between Jonathan P. Carroll ("Guarantor") and Nixon Product Storage, LLC, a Delaware limited liability company ("NPS"). Guarantor and NPS are sometimes referred to herein as the "**Parties**".

WHEREAS, NPS entered a Loan Agreement (as amended, restated, supplemented or otherwise modified from time to time, the "**Loan Agreement**") dated October 1, 2021, with Greater Nevada Credit Union ("**Lender**") as evidenced by: (1) that certain Guaranteed Note of even date with the Loan Agreement, in the original principal sum of NINE MILLION AND 00/100 DOLLARS ($9,000,000.00) and (2) that certain Non-Guaranteed Note of even date with the Loan Agreement, in the original principal sum of ONE MILLION AND 00/100 DOLLARS ($1,000,000.00), collectively referred to herein as (the "**Notes**"); and

WHEREAS, as a condition precedent to Lender's obligations to extend credit to NPS under the Loan Agreement, Lender required the execution and delivery of an unconditional guaranty as security for the obligations of NPS under the Loan Agreement and Notes; and

WHEREAS, Guarantor entered a United States Department of Agriculture Rural Development Unconditional Guarantee, Business and Industry Guaranteed Loan Program (as amended, restated, supplemented or otherwise modified from time to time, the "**Guaranty**") of even date with the Loan Agreement and Notes in favor of Lender to secure NPS's obligations under the Loan Agreement and Notes.

NOW, THEREFORE, in consideration of the Guaranty and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by NPS, the Parties agree as follows:

1. Payment of Fee. NPS shall pay Guarantor or assignee a fee in an amount equal to two percent (2.00%) per annum (the "**Guaranty Fee**"), paid monthly, of the outstanding principal balance owed under the Loan Agreement (the "**Guaranty Fee Basis**"). Amounts payable to Guarantor as the Guaranty Fee shall be paid in cash at the end of each calendar month.

2. Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of Texas without reference to any conflict of law provision.

3. Counterparts. This Agreement may be executed in multiple counterparts, including counterparts transmitted by facsimile, each of which will be deemed an original, but both of which together will constitute one and the same instrument.

[Remainder of page intentionally left blank; signature page to follow.]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

NIXON PRODUCT STORAGE, LLC	JONATHAN P. CARROLL
By: Jonathan Carroll (Mar 14, 2023 10:09 CDT)	By: Jonathan Carroll (Mar 14, 2023 10:09 CDT)
Jonathan P. Carroll	Jonathan P. Carroll

NPS Guaranty Fee Agreement $10M 1-1-23

Final Audit Report 2023-03-14

Created:	2023-03-14
By:	Ty Graham (tylermurrellgraham@gmail.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA0_ML8K36N4QwJMJT2Hzh0AhFFdXLjRB2

"NPS Guaranty Fee Agreement $10M 1-1-23" History

Document created by Ty Graham (tylermurrellgraham@gmail.com)
2023-03-14 - 3:06:58 PM GMT- IP address: 99.1.46.45

Document emailed to Jonathan Carroll (jcarroll@lazarusenergy.com) for signature
2023-03-14 - 3:07:52 PM GMT

Email viewed by Jonathan Carroll (jcarroll@lazarusenergy.com)
2023-03-14 - 3:09:41 PM GMT- IP address: 69.147.87.121

Document e-signed by Jonathan Carroll (jcarroll@lazarusenergy.com)
Signature Date: 2023-03-14 - 3:09:59 PM GMT - Time Source: server- IP address: 108.250.11.161

Agreement completed.
2023-03-14 - 3:09:59 PM GMT

AMENDED AND RESTATED GUARANTY FEE AGREEMENT

THIS AMENDED AND RESTATED GUARANTY FEE AGREEMENT (this "**Second Amended Agreement**") is made as of January 1, 2023 (the "**Effective Date**"), by and between Jonathan P. Carroll ("Guarantor") and Lazarus Energy, LLC, a Delaware limited liability company ("**LE**"). Guarantor and LE are sometimes referred to herein as the "**Parties**".

WHEREAS, on June 22, 2015, Guarantor and LE entered that certain Guaranty Fee Agreement (the "Original Agreement") wherein Guarantor received fees for providing a personal guarantee on repayment of funds borrowed and interest accrued under a certain LE loan agreement;

WHEREAS, LE entered a Loan Agreement (as amended, restated, supplemented or otherwise modified from time to time, the "**Loan Agreement**") dated June 22, 2015, with Sovereign Bank, later succeeded in interest by merger by Veritex community Bank ("**Lender**"), as evidenced by that certain Promissory Note (the "**Note**") of even date with the Loan Agreement, in the original principal sum of TWENTY-FIVE MILLION AND 00/100 DOLLARS ($25,000,000.00);

WHEREAS, as a condition precedent to Lender's obligations to extend credit to LE under the Loan Agreement, Lender required the execution and delivery of an unconditional guaranty as security for the obligations of LE under the Loan Agreement and Note;

WHEREAS, Guarantor entered a United States Department of Agriculture Rural Development Unconditional Guarantee, Business and Industry Guaranteed Loan Program (as amended, restated, supplemented or otherwise modified from time to time, the "**Guaranty**") of even date with the Loan Agreement and Note in favor of Lender to secure LE's obligations under the Loan Agreement and Note;

WHEREAS, on April 1, 2017, Guarantor and LE entered the Amended and Restated Guaranty Fee Agreement (the "**First Amended Agreement**") wherein Guarantor received fees for providing a personal guarantee on repayment of funds borrowed and interest accrued under the Loan Agreement; and

WHEREAS, LE and Guarantor desire to revise the payment terms of the First Amended Agreement.

NOW, THEREFORE, in consideration of the Guaranty and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by LE, the Parties agree as follows:

1. Payment of Fee. LE shall pay Guarantor or assignee a fee in an amount equal to two percent (2.00%) per annum (the "**Guaranty Fee**"), paid monthly, of the outstanding principal balance owed under the Loan Agreement (the "**Guaranty Fee Basis**"). Amounts payable to Guarantor as the Guaranty Fee shall be paid 100% in cash.

2. Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of Texas without reference to any conflict of law provision.

3. Counterparts. This Agreement may be executed in multiple counterparts, including counterparts transmitted by facsimile, each of which will be deemed an original, but both of which together will constitute one and the same instrument.

[Remainder of page intentionally left blank; signature page to follow.]

IN WITNESS WHEREOF, the Parties have executed this Amended Agreement as of the Effective Date.

LAZARUS ENERGY, LLC	JONATHAN P. CARROLL
By: Jonathan Carroll (Mar 14, 2023 10:01 CDT)	By: Jonathan Carroll (Mar 14, 2023 10:01 CDT)
Jonathan P. Carroll	Jonathan P. Carroll

Amended & Restated LE Guaranty Fee Agreement 1-1-23 $25M

Final Audit Report 2023-03-14

Created:	2023-03-14
By:	Ty Graham (tylermurrellgraham@gmail.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAApJx7mJHfDrkFYenu2tpGVn41S84o_4p-

"Amended & Restated LE Guaranty Fee Agreement 1-1-23 $25 M" History

Document created by Ty Graham (tylermurrellgraham@gmail.com)
2023-03-14 - 3:00:15 PM GMT- IP address: 99.1.46.45

Document emailed to Jonathan Carroll (jcarroll@lazarusenergy.com) for signature
2023-03-14 - 3:01:09 PM GMT

Email viewed by Jonathan Carroll (jcarroll@lazarusenergy.com)
2023-03-14 - 3:01:39 PM GMT- IP address: 69.147.86.248

Document e-signed by Jonathan Carroll (jcarroll@lazarusenergy.com)
Signature Date: 2023-03-14 - 3:01:55 PM GMT - Time Source: server- IP address: 108.250.11.161

Agreement completed.
2023-03-14 - 3:01:55 PM GMT

AMENDED AND RESTATED GUARANTY FEE AGREEMENT

THIS AMENDED AND RESTATED GUARANTY FEE AGREEMENT (this "**Second Amended Agreement**") is made as of January 1, 2023 (the "**Effective Date**"), by and between Jonathan P. Carroll ("Guarantor") and Lazarus Refining & Marketing, LLC, a Delaware limited liability company ("**LRM**"). Guarantor and LRM are sometimes referred to herein as the "**Parties**".

WHEREAS, on December 4, 2015, Guarantor and LRM entered that certain Guaranty Fee Agreement (the "Original Agreement") wherein Guarantor received fees for providing a personal guarantee on repayment of funds borrowed and interest accrued under a certain LRM loan agreement;

WHEREAS, LRM entered a Loan Agreement (as amended, restated, supplemented or otherwise modified from time to time, the "**Loan Agreement**") dated December 4, 2015, with Sovereign Bank, later succeeded in interest by merger by Veritex community Bank ("**Lender**"), as evidenced by that certain Promissory Note (the "**Note**") of even date with the Loan Agreement, in the original principal sum of TEN MILLION AND 00/100 DOLLARS ($10,000,000.00);

WHEREAS, as a condition precedent to Lender's obligations to extend credit to LRM under the Loan Agreement, Lender required the execution and delivery of an unconditional guaranty as security for the obligations of LRM under the Loan Agreement and Note;

WHEREAS, Guarantor entered a United States Department of Agriculture Rural Development Unconditional Guarantee, Business and Industry Guaranteed Loan Program (as amended, restated, supplemented or otherwise modified from time to time, the "**Guaranty**") of even date with the Loan Agreement and Note in favor of Lender to secure LRM's obligations under the Loan Agreement and Note;

WHEREAS, on April 1, 2017, Guarantor and LRM entered the Amended and Restated Guaranty Fee Agreement (the "**First Amended Agreement**") wherein Guarantor received fees for providing a personal guarantee on repayment of funds borrowed and interest accrued under the Loan Agreement; and

WHEREAS, LRM and Guarantor desire to revise the payment terms of the First Amended Agreement.

NOW, THEREFORE, in consideration of the Guaranty and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by LRM, the Parties agree as follows:

1. Payment of Fee. LRM shall pay Guarantor or assignee a fee in an amount equal to two percent (2.00%) per annum (the "**Guaranty Fee**"), paid monthly, of the outstanding principal balance owed under the Loan Agreement (the "**Guaranty Fee Basis**"). Amounts payable to Guarantor as the Guaranty Fee shall be paid 100% in cash.

2. Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of Texas without reference to any conflict of law provision.

3. Counterparts. This Agreement may be executed in multiple counterparts, including counterparts transmitted by facsimile, each of which will be deemed an original, but both of which together will constitute one and the same instrument.

[Remainder of page intentionally left blank; signature page to follow.]

IN WITNESS WHEREOF, the Parties have executed this Amended Agreement as of the Effective Date.

LAZARUS REFINING & MARKETING, LLC	JONATHAN P. CARROLL
By: Jonathan Carroll (Mar 14, 2023 09:59 CDT)	By: Jonathan Carroll (Mar 14, 2023 09:59 CDT)
Jonathan P. Carroll	Jonathan P. Carroll

Amended & Restated LRM Guaranty Fee Agreement 1-1-23 $10M

Final Audit Report 2023-03-14

Created:	2023-03-14
By:	Ty Graham (tylermurrellgraham@gmail.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAEWfcMADocXEncKcN93wb-MR5SMmkZ3cb

"Amended & Restated LRM Guaranty Fee Agreement 1-1-23 $10M" History

Document created by Ty Graham (tylermurrellgraham@gmail.com)
2023-03-14 - 2:54:59 PM GMT- IP address: 99.1.46.45

Document emailed to Jonathan Carroll (jcarroll@lazarusenergy.com) for signature
2023-03-14 - 2:56:44 PM GMT

Email viewed by Jonathan Carroll (jcarroll@lazarusenergy.com)
2023-03-14 - 2:58:20 PM GMT- IP address: 69.147.87.55

Document e-signed by Jonathan Carroll (jcarroll@lazarusenergy.com)
Signature Date: 2023-03-14 - 2:59:01 PM GMT - Time Source: server- IP address: 108.250.11.161

Agreement completed.
2023-03-14 - 2:59:01 PM GMT

EXHIBIT 21.1

List of subsidiaries of Blue Dolphin Energy Company ("Blue Dolphin"):

- Lazarus Energy, LLC, a Delaware limited liability company;
- Lazarus Refining & Marketing, LLC, a Delaware limited liability company
- Nixon Product Storage, LLC, a Delaware limited liability company
- Blue Dolphin Pipe Line Company, a Delaware corporation;
- Blue Dolphin Petroleum Company, a Delaware corporation;
- Blue Dolphin Services Co., a Texas corporation;
- Blue Dolphin Exploration Company, a Delaware corporation; and
- Petroport, Inc., a Delaware corporation.

UHY LLP
Certified Public Accountants

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (Nos. 333-134156, 333-38606 and 333-124908) of Blue Dolphin Energy Company of our report dated March 31, 2023, relating to our audit of the consolidated financial statements, which appear in this Annual Report on Form 10-K for the year ended December 31, 2022.

/s/ UHY LLP
UHY LLP

Sterling Heights, Michigan
April 3, 2023

EXHIBIT 31.1

I, Jonathan P. Carroll, certify that:

1. I have reviewed this annual report on Form 10-K of Blue Dolphin Energy Company (the "Registrant").

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the periods covered by this annual report;

3. Based on my knowledge, the financial statements and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this annual report;

4. I am responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and I have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under my supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to me by others within those entities, particularly during the period in which this annual report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under my supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this annual report my conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and

   d) Disclosed in this annual report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of this annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. I have disclosed, based on my most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the Audit Committee of the Registrant's Board of Directors:

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: April 3, 2023

/s/ JONATHAN P. CARROLL
Jonathan P. Carroll
Chief Executive Officer, President, Assistant Treasurer and Secretary
(Principal Executive Officer, Principal Financial Officer, and Principal Accounting Officer)

EXHIBIT 32.1

CERTIFICATION OF
PRINCIPAL EXECUTIVE OFFICER AND
PRINCIPAL FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Blue Dolphin Energy Company (the “Blue Dolphin”) on Form 10-K for the period ended December 31, 2022 (the “Report”), as filed with the Securities and Exchange Commission on the date hereof, I, Jonathan P. Carroll, Chief Executive Officer, President, Assistant Treasurer and Secretary (Principal Executive Officer, Principal Financial Officer, and Principal Accounting Officer) of Blue Dolphin, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Blue Dolphin.

/s/ JONATHAN P. CARROLL
Jonathan P. Carroll
Chief Executive Officer, President, Assistant Treasurer and Secretary
(Principal Executive Officer, Principal Financial Officer, and Principal Accounting Officer)

April 3, 2023