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, 2021**

☐ **TRANSITION REPORT UNDER SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number 001-31895

ODYSSEY MARINE EXPLORATION, INC.
(Exact name of registrant as specified in its charter)

Nevada	**84-1018684**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

205 S. Hoover Blvd, Suite 210, Tampa FL 33609
(Address and zip code of principal executive offices)

(813) 876-1776
(Registrant's telephone number including area code)

Securities registered pursuant Section 12(b) of the Act:

Common Stock, $.0001 par value	**OMEX**	**NASDAQ Capital Market**
(Title of each class)	**(Trading symbol)**	**(Name of each exchange on which registered)**

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

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 Securities Act. Yes ☐ No ☒

Indicate by 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 and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post 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 definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

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 controls 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. ☐

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 the 12.3 million shares of voting stock held by non-affiliates of Odyssey Marine Exploration, Inc. as of June 30, 2021, was approximately $78.2 million. As of March 8, 2022, the Registrant had 14,349,363 shares of Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

The information required by Part III of this Form 10-K is incorporated by reference to the Company's Definitive Proxy Statement for the Registrant's Annual Meeting of Stockholders to be held on June 13, 2022.

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As used in this Annual Report on Form 10-K, "we," "us," "our company" and "Odyssey" mean Odyssey Marine Exploration, Inc. and our subsidiaries, unless the context indicates otherwise.

PART I

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Act of 1934, as amended. The statements regarding Odyssey Marine Exploration, Inc. and its subsidiaries contained in this report that are not historical in nature, particularly those that utilize terminology such as "may," "will," "should," "likely," "expects," "anticipates," "estimates," "believes," "plans," or comparable terminology, are forward-looking statements based on current expectations and assumptions, and entail various risks and uncertainties that could cause actual results to differ materially from those expressed in such forward-looking statements.

Important factors known to us that could cause such material differences are identified in our "RISK FACTORS" in Item 1A and elsewhere in this report. Accordingly, readers of this Annual Report on Form 10-K should consider these factors in evaluating an investment in our securities and are cautioned not to place undue reliance on the forward-looking statements contained herein. We undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information or future events unless otherwise specifically indicated, except as required by law.

ITEM 1.BUSINESS

Overview

Odyssey Marine Exploration, Inc. discovers, validates and develops high-value seafloor resources in an environmentally responsible manner, providing access to critical resources that can transform societies and economies for generations to come.

The company has a diversified mineral portfolio that includes projects controlled by us and other projects in which we are a minority owner and service provider. In addition, our team is continually working to add new projects to the portfolio by identifying potential new assets through a proprietary Global Prospectivity Program leading to the acquisition of appropriate rights. Our development focus is on projects that can meet stringent standards for environmental responsibility and sustainability while unlocking benefits for the host country. Environmental protection remains at the forefront of the strategic and tactical decision-making processes in all our work.

Each project in the portfolio is advanced along a defined development path, decreasing risk and increasing value along the way. These steps may include, but are not limited to, verification and quantification of the mineral asset, collection of baseline environmental data essential for environmental permitting, environmental impact studies and reports, design and verification of extraction systems and definition and verification of commercial programs. Odyssey may elect to sell equity in individual projects to fund continued advancement of the project.

For nearly 30 years, we have deployed cutting-edge ocean technology and processes at depths up to 6,000 meters, under the direction of some of the industry's most skilled and successful ocean exploration professionals, scientists, and environmental specialists.

Importance of Seabed Mineral Exploration

There is growing global demand for critical mineral resources to power the green economy, feed the world's growing population and provide vital infrastructure. Land based deposits of cobalt, manganese, rare earth minerals, phosphorite, gold, silver, copper and zinc are being depleted. As the worldwide population continues to grow, it is necessary to explore additional and alternative sources of these much-needed materials.

Climate change and the global transition to a lower carbon economy presents opportunities for Odyssey given the increased demand for raw materials for the future green economy including those that will be required for renewable energy generation and storage. Furthermore, as the worldwide population continues to grow, it is necessary to explore additional and alternative sources of these much-needed materials.

Subsea mineral deposits can provide these critical resources with less social and environmental impact. We have the expertise and technology to find and access these deposits and to prepare the project for extraction in an economically feasible and environmentally sensitive way.

Benefits of Ocean Mineral Resource Development

Some of the benefits of ocean mineral resource development include:

- Infrastructure Expense: No site-specific infrastructure and generally low capital expenditures – ship-based extraction systems provide the ability to redeploy, repurpose or increase equipment productivity through cost/tonne or ship charter financing options.
- Overburden: Little overburden to be removed in most proposed seafloor mining projects which contributes to operational efficiencies.
- Flexibility: Extraction ships can move to different types of deposits/minerals to suit market conditions without infrastructure loss at minimal costs.
- Social Displacement: No people are displaced, no disruption of society or property.
- Environmental Impact: Seafloor mining can be done responsibly with limited biological impact and a manageable carbon footprint. No forested lands will be impacted, and freshwater systems are not affected. Seafloor dredging, aggregate and diamond mining have been carried out for many years in shallow waters around the world and with appropriate mitigation programs have posed minimal adverse impact to marine ecosystems.
- Shipping logistics are efficient as ore and materials are extracted and moved directly to bulk carriers, lowering the number of steps in the delivery process thus reducing costs.

Considering the benefits of subsea mineral resource extraction, we are convinced that in the future, ocean mining will be the best practice for responsible provision of critical resources required worldwide. Odyssey is taking the lead in preparing for this future through the validation and development of environmentally and socially responsible seafloor mineral projects.

Mineral and Offshore Services

We provide specialized mineral exploration, project development and marine services to clients (subsidiary companies, other companies and/or governments). As our business is focused on the development of a diversified portfolio of subsea resources, we may elect to receive equity for the provision of our services on select mineral projects. We have an extensive history conducting deep-ocean projects down to 6,000 meters in depth including deep-ocean resource explorations, ship and airplane wreck explorations, archaeological recovery and conservation and insurance documentation and applying this experience and expertise to advance our project portfolio.

Operational Projects and Status

We focus on projects that can meet stringent standards for environmental responsibility while unlocking benefits for the host community and country.

Our subsea project portfolio contains multiple projects in various stages of development throughout the world and across different mineral resources. We are regularly adding new projects through the development of new deposits, acquisition of mineral rights/deposits and through a leveraged contracting model, which allows the company to earn equity in deep-sea mineral projects.

With respect to mineral deposits, Subpart 1300 of Regulations S-K outlines the Securities and Exchange Commission's basic mining disclosure policy and what information may be disclosed in public filings. The SEC has adopted amendments to the property disclosure requirements for mining registrants that must be complied with for the full fiscal year beginning on or after January 1, 2021, See Item 2 Properties.

Although Odyssey has a variety of projects in various stages of development, only projects with material operational activity in the past 12 months are included below.

ExO Phosphate Project:

The "Exploraciones Oceanicas" Phosphate Project is a rich deposit of phosphate sands located 70-90 meters deep within Mexico's Exclusive Economic Zone. This deposit contains a large amount of high-grade phosphate rock that can be extracted on a financially attractive basis (essentially a standard dredging operation). The product will be attractive to Mexican and other world producers of fertilizers and can provide important benefits to Mexico's agricultural development.

The deposit lies within an exclusive mining concession licensed to the Mexican company Exploraciones Oceánicas S. de R.L. de CV ("ExO"). Oceanica Resources, S. de R.L., a Panamanian company ("Oceanica") owns 99.99% of ExO, and Odyssey owns 56.29% of Oceanica through Odyssey Marine Enterprises, Ltd., a wholly owned Bahamian company ("Enterprises").

In 2012, ExO was granted a 50-year mining license by Mexico (extendable for another 50 years at ExO's option) for the deposit that lies 25-40 km offshore in Baja California Sur. An NI 43-101 compliant report was completed on the deposit in 2014 and has been periodically updated.

We spent more than three years preparing an environmentally sustainable development plan with the assistance of experts in marine dredging and leading environmental scientists from around the world. Key features of the environmental plan included:

- No chemicals would be used in the dredging process or released into the sea.
- A specialized return down pipe that exceeds international best practices to manage the return of dredged sands close to the seabed, limiting plume or impact to the water column and marine ecosystem (including primary production).
- The seabed would be restored after dredging in such a way as to promote rapid regeneration of seabed organisms in dredged areas.
- Ecotoxicology tests demonstrated that the dredging and return of sediment to the seabed would not have toxic effects on organisms.
- Sound propagation studies concluded that noise levels generated during dredging would be similar to whale-watching vessels, merchant ships and fisherman's ships that already regularly transit this area, proving the system is not a threat to marine mammals.
- Dredging limited to less than one square kilometre each year, which means the project would operate in only a tiny proportion of the concession area each year.
- Proven turtle protection measures were incorporated, even though the deposit and the dredging activity are much deeper and colder than where turtles feed and live, making material harm to the species highly remote.
- There will be no material impact on local fisheries as fishermen have historically avoided the water column directly above the deposit due to the naturally low occurrence of fish there.
- The project would not be visible from the shoreline and would not impact tourism or coastal activities.
- Precautionary mitigation measures were incorporated into the development plan in line with best-practice global operational standards.
- The technology proposed to recover the phosphate sands has been safely used in Mexican waters for over 20 years on more than 200 projects.

Notwithstanding the factors stated above, in April 2016 the Mexican Ministry of the Environment and Natural Resources (SEMARNAT) unlawfully rejected the permission to move forward with the project.

ExO challenged the decision in Mexican Federal court and in March 2018, the Tribunal Federal de Justicia Administrativa (TFJA), an 11-judge panel, ruled unanimously that SEMARNAT denied the application in violation of Mexican law and ordered the agency to re-take their decision. Just prior to the change in administration later in 2018, SEMARNAT denied the permit a second time in defiance of the court. ExO is once again challenging the unlawful decision of the Peña Nieto administration before the TFJA. In addition, in April 2019, we filed a NAFTA Claim against Mexico to protect our shareholders' interests and significant investment in the project.

Our claim seeks compensation of over $2 billion on the basis that SEMARNAT's wrongful repeated denial of authorization has destroyed the value of our investment in the country and is in violation of the following provisions of NAFTA:

- Article 1102. National Treatment.
- Article 1105. Minimum Standard of Treatment; and
- Article 1110. Expropriation and Compensation.

We filed First Memorial in the NAFTA case in September 2020. It is supported by documentary evidence and 20 expert reports and witness statements. In summary, this evidence includes:

- MERITS: Testimony from independent environmental experts that the environmental impact of ExO's phosphate project is minimal and readily mitigated by the mitigation measures proposed by ExO. Witnesses also testified that

Mexico's denial of environmental approval by the prior administration was politically motivated and not justified on environmental grounds, and that Mexico granted environmental permits to similar dredging projects in areas that are considered more environmentally sensitive than ExO's project location.

- RESOURCE: An independent certified marine geologist testified as to the size and character of the resource.
- OPERATIONAL VIABILITY: Engineering experts testified that the project uses established dredging and processing technology, and the project's anticipated CAPEX and OPEX was reasonable.
- VALUE: A phosphate market analyst testified that the project's projected CAPEX and OPEX would make the project one of the lowest cost phosphate rock resources in the world, and damages experts testified the project would be commercially viable and profitable.

Odyssey filed its First Memorial in the case on September 4, 2020. Mexico filed its Counter-Memorial on February 23, 2021. On June 29, 2021, we filed our reply to Mexico's Counter-Memorial. Odyssey's filings are available at www.odysseymarine.com/nafta. Mexico filed their Rejoinder on October 19, 2021. All filings are available on the ICSID website. The NAFTA's Tribunal hearing took place from January 24 – January 29, 2022. After this evidentiary phase is closed by the Tribunal, deliberations will begin. Odyssey cannot predict the length of these deliberations or when a ruling will be issued, but we remain confident in the merits of our case.

On June 14, 2019, Odyssey executed an agreement that provided up to $6.5 million in funding for prior, current and future costs of the NAFTA action. On January 31, 2020, this agreement was amended and restated, as a result of which the availability increased to $10.0 million. In December 2020, Odyssey announced it secured an additional $10 million from the funder to aid in our NAFTA case. On June 14, 2021, the funder agreed to fund up to an additional $5.0 million for litigation costs. The funder will not have any right of recourse against us unless the environmental permit is awarded or if proceeds are received (See NOTE H – LOANS PAYABLE – Litigation Financing).

LIHIR Gold Project:

The exploration license for the Lihir Gold Project covers a subsea area that contains at least five prospective gold exploration targets in two different mineralization types: seamount-related epithermal and modern placer gold. Two subaqueous debris fields within the area are adjacent to the terrestrial Ladolam Gold Mine and are believed to have originated from the same volcanogenic source. The resource lies 500-2,000 meters deep in the Papua New Guinea Exclusive Economic Zone off the coast of Lihir Island, adjacent to the location of one of the world's largest know terrestrial gold deposits. We have an indirect 85.6% interest in Bismarck Mining Corporation, Ltd, the Papua New Guinea company that holds the exploration license for the project.

Previous exploration expeditions in the license area, including a survey conducted by Odyssey, indicate a polymetallic resource with commercially viable gold content likely exists.

In August 2021, Papua New Guinea (PNG) issued a permit extension allowing Odyssey to continue with our exploration program. We have developed an exploration program for the Lihir Gold Project to validate and quantify the precious and base metal content of the prospective resource. The Company met with local regulatory authorities, specialists in local mining, environmental legal experts, and logistics support service companies in PNG to establish baseline business functions essential for a successful program to support upcoming marine exploration operations in the license area. This offshore work began in late 2021 and will continue, provided there are no constraints from the COVID-19 pandemic or other unexpected impediments. Bismarck and Odyssey value the environment and respect the interests and people of Papua New Guinea and Lihir and are committed to transparent sharing of all environmental data collected during the exploration program.

Offshore survey and mapping operations commenced in December 2021 in the Papua New Guinea, Lihir license area. Raw data is being processed to produce a report and full analysis. The goals of this work include producing a high-resolution acoustic terrain model of the seafloor in the area, as well as acquiring acoustic images of subseafloor sediments and lithology. This will provide a basis for characterizing the geologic setting of the area and essentially creating a "snapshot" of the environment. These activities will help us to further characterize the value of this project and allow informed decision making on how to proceed with environmentally sensitive direct geologic sampling.

Odyssey's multi-year exploration program will focus on robust environmental surveys and studies that will accrue to environmental permitting in compliance with PNG's requirements as well as the development of an EIA (Environmental Impact Assessment). During the exploration phase, steps to validate and quantify the precious and base metal content of the prospective resource will also be carried out. Once completed, if the data shows extraction can be carried out responsibly, Odyssey will apply for a Mining License.

Further development of this project is dependent on the characterization of any present resources during exploration and license approvals.

CIC Project:

Odyssey is a member of the CIC Consortium, which is seeking an exploration license in an island nation's Exclusive Economic Zone. The CIC Consortium was founded and is led by Odyssey co-founder and former CEO, Greg Stemm, and includes Royal Boskalis Westminster NV and Odyssey Marine Exploration.

In December 2021, the Cook Islands Seabed Minerals Authority's (SBMA) Licensing Panel evaluated three applications and announced that CIC LIMITED (CIC) met the qualification criteria for an exploration license. On February 23, 2022, CIC was awarded a five-year exploration license by the Cook Islands

Through a wholly owned subsidiary, we have earned and now hold approximately 13.4% of the current outstanding equity units of CIC. We have the ability to earn up to 20.0 million equity units over the next several calendar years, which represents an approximate 16.0% interest in CIC based on the currently outstanding equity units. This means we can earn approximately 3.5 million additional equity units in CIC. We achieved our current equity position through the provision of services related to resource assessment, project planning, research and project management. We receive cash and equity for services rendered to this venture, see NOTE G.

Antigua and Barbuda:

In September 2021, Odyssey entered into a Memorandum of Understanding (MoU) with the Government of Antigua and Barbuda to determine the feasibility of a sustainable seabed mineral resource program from highly prospective areas in their Exclusive Economic Zone. There is a high probability for polymetallic nodule formation based on legacy data, regional analysis and seafloor conditions which are similar to and adjacent to our target area. Development of an exploration program, which will be the basis for a definitive agreement between the parties, is in late-stage development. Additional information will be released upon execution of the definitive agreement, which is expected in the coming months.

Brazilian Phosphate Project:

Odyssey reached an exclusive agreement early in 2022 with BlueSea Minerals, Ltd. and BlueSea Minerals Brasil Ltda, (collectively BlueSea Group) to create a new joint venture (JV) company in which Odyssey will own a 75% interest. The new company will have exclusive rights to 19 highly prospective phosphate areas in the Exclusive Economic Zone (EEZ) of Brazil. Legacy data and desktop research indicate high-grade phosphate deposits in the concession areas.

Pending execution of the definitive agreement, Odyssey will manage the overall Brazilian Phosphate Project development and BlueSea Group will manage business operations in Brazil. A related party to BlueSea Group, SeaSeep, a Brazilian entity, will provide marine operations services, supervised by Odyssey.

The 19 licenses to be developed by the JV include 366 square kilometres of seabed in the Brazilian EEZ. The geological setting of these licenses is similar to the geology Odyssey identified off the coast of Mexico, which is now known as the ExO Phosphate deposit ("ExO"). The NI 43-101 for the ExO deposit estimated 588 million tonnes of high-grade resource, even though the NI 43-101 only considered 206.5 square kilometres of the 1147 square kilometres covered by the ExO mining concession. Even based on 2016 phosphate pricing, the ExO project had extremely compelling economics that demonstrated that ExO could have been one of the lowest cost producers in the world. Since then, phosphate prices have surged and the need for phosphate to combat world hunger continues to grow. It is anticipated that the Brazilian deposits can be dredged with the standard technology and engineering solutions already identified for the ExO Project, which will allow the phosphate to be recovered in an environmentally responsible manner without the addition of any chemicals into the sea.

Legal and Political Issues

Odyssey works with several leading international maritime lawyers and policy experts to constantly monitor international legal initiatives that might affect our projects.

To the extent that we engage in mineral exploration or marine activities in the territorial, contiguous or exclusive economic zones of countries, we work to comply with verifiable applicable regulations and treaties.

We believe there will be increased interest in the recovery of subsea minerals throughout the oceans of the world. We are uniquely qualified to provide governments and international agencies with knowledge and skills to help manage these resources.

Related to mineral exploration, we evaluate the political climate and specific legal requirements of any areas in which we are working. We may partner with third parties who have unique industry experience in specific geographical areas to assist with navigation of the regulatory landscape.

Competition

We conduct mineral exploration on both shallow and deep-sea terrains. There are several companies that publicly identify themselves as engaged in aspects of deep-ocean mineral exploration or mining, including DSMF (OTCM:NUSMF), Neptune Minerals, Deep Green Resources, Inc., which recently combined with the Sustainable Opportunities Acquisition Corporation to go public as The Metals Company (NASDAQ:TMC), GSR, and Chatham Rock Phosphate, Ltd. (CRP.NZ), as well as countries that are evaluating options to mine deep-ocean mineralized materials. As our mineral exploration business plan includes partnering with others in the industry, we view these entities as potential partners rather than pure competitors. As mineral rights are generally granted on an exclusive basis for a specific area or tenement, once licenses are granted, we do not anticipate any competitive intrusion on those areas. It is possible that one of these companies or some currently unknown group may secure licenses on an area desired by us or one of our partners; but since exploration work does not start until licenses are secured, we do not believe that competition from one or more of these entities, known or unknown, would materially affect our operating plan or alter our current business strategy. For offshore mineral exploration, there are providers of vessels and equipment that could be competitors or partners for certain projects. These companies generally service the oil, gas and telecom industries with survey capabilities. We view these companies as potential strategic partners or services providers for our projects.

Cost of Environmental Compliance

With the exception of marine operations, our general business operations do not expose us to environmental risks or hazards. We carry insurance that provides a layer of protection in the event of an environmental exposure resulting from the operation of vessels we may utilize. The cost of such coverage is not material on an annual basis. Our seabed mineral business is currently in the exploration and validation phase and has thus not exposed us to any significant environmental risks or hazards, other than those which are standard to basic marine operations.

Executive Officers of the Registrant

The names, ages and positions of all the executive officers of the Company as of March 1, 2022, are listed below.

Mark D. Gordon (age 61) has served as Chief Executive Officer since October 1, 2014, and was appointed to the Board of Directors in January 2008. Mr. Gordon also served as President from October 2007 to June 2019, when he was appointed Chairman of the Board. Previously, Mr. Gordon served as Chief Operating Officer since October 2007 and as Executive Vice President of Sales and Business Development since January 2007 after joining Odyssey as Director of Business Development in June 2005. Prior to joining Odyssey, Mr. Gordon owned and managed four different ventures.

Christopher E. Jones (age 48) has served as Chief Financial Officer since June 15, 2021. Prior to joining Odyssey, Mr. Jones served as Vice President of Corporate Finance at Mohegan Gaming & Entertainment (MGE) since 2017; Managing Director at Buckingham Research Group from 2016 to 2017; Managing Director at Union Gaming from 2014 to 2016 and Managing Director at Telsey Advisory Group (TAG) from 2008 to 2014. He has also held positions at Oppenheimer & Company, Merrill Lynch and Lehman Brothers.

Jay A. Nudi, CPA (age 58) has served as Principal Accounting Officer since January 2006 and Treasurer since May 2010. Previously, Mr. Nudi served as the Chief Financial Officer from 2016 to 2021. Mr. Nudi joined the Company in May 2005 in the Corporate Controller capacity. Prior to joining Odyssey, Mr. Nudi served as Controller for The Axis Group in Atlanta (2003 to 2004).

John D. Longley, Jr. (age 55) has served as Chief Operating Officer since October 1, 2014 and was appointed President on June 3, 2019. Previously Mr. Longley served as Executive Vice President of Sales and Business Development since February 2012. Mr. Longley was originally the Director of Sales and Business Operations when he joined the Company in May 2006. Prior to joining Odyssey, Mr. Longley served as Vice President of Sales and Marketing for Public Imagery from 2003 to 2005 and Director of Retail Marketing for Office Depot North American stores from 1998 to 2003.

Laura L. Barton (age 59) was appointed as Chief Business Officer in March 2021 and was elected to the Board of Directors in June 2019 and has served as Corporate Secretary since June 2015. She formerly served as Vice President and Director of Corporate Communications from November 2007 to June 2012 and Executive Vice President and Director of Communications from 2012 until 2021. Ms. Barton previously served as Director of Corporate Communications and Marketing for Odyssey since July 2003. Ms. Barton was previously President of LLB Communications, a marketing and communications consulting company whose customers included a variety of television networks, stations and distributors and the Company (1994 to 2003).

Human Capital Management

As of December 31, 2021, we had 13 full-time employees, most working from our corporate offices in Tampa, Florida. Additionally, we contract with specialized technicians to perform technical marine survey and recovery operations and from time to time hire subcontractors and consultants to perform specific services.

Odyssey has historically experienced low voluntary employee turnover. We believe this is a testament to our culture of treating our employees well, providing them with the tools and flexibility to be productive, and maintaining an environment of mutual trust and respect. We offer competitive compensation and generous health benefits and flexible work schedules which in turn helps foster employee loyalty.

As the company continues to grow, we recognize our continued success will depend on our ability to recruit, develop and retain skilled employees, including those from younger generations, whose backgrounds and skills will be critical to drive innovation and meet future challenges. Enhancing gender and racial/ethnic diversity in management and our broader workforce is among Odyssey's priorities for the coming years.

Internet Access

Odyssey's Forms 10-K, 10-Q, 8-K and all amendments to those reports are available without charge through Odyssey's web site on the Internet as soon as reasonably practicable after they are electronically filed with, or furnished to, the Securities and Exchange Commission, *www.sec.gov*. They may be accessed as follows: *www.odysseymarine.com* (Investors/Financial Information Link).

ITEM 1A.RISK FACTORS

You should carefully consider the following factors, in addition to the other information in this Annual Report on Form 10-K, in evaluating our company and our business. Our business, operations and financial condition are subject to various risks. The material risks are described below and should be carefully considered in evaluating Odyssey or any investment decision relating to our securities. This section is intended only as a summary of the principal risks. If any of the following risks actually occur, our business, operating results, or financial results could suffer. If this occurs, the trading price of our common stock could decline, and you could lose all or part of the money you paid to buy our common stock.

Our business involves a high degree of risk.

An investment in Odyssey is extremely speculative and of exceptionally high risk. With respect to mineral exploration projects, there are uncertainties with respect to the quality and quantity of the material and their economic feasibility, the price we can obtain for the sale of the deposit or the ore extracted from the deposit, the granting of the necessary permits to operate, environmental safety, technology for extraction and processing, distribution of the eventual ore product, and funding of necessary equipment and facilities. In projects where Odyssey takes a minority ownership position in the company holding the mining rights, there may be uncertainty as to that company's ability to move the project forward.

The research and data we use may not be reliable.

The success of a mineral project is dependent to a substantial degree upon the research and data we or the contracting party have obtained. By its very nature, research and data regarding mineral deposits can be imprecise, incomplete, outdated, and unreliable. For mineral exploration, data is collected based on a sampling technique and available data may not be representative of the entire ore body or tenement area. Prior to conducting off-shore exploration, we typically conduct on-shore research. There is no guarantee that the models and research conducted onshore will be representative of actual results on the seafloor. Offshore exploration typically requires significant expenditures, with no guarantee that the results will be useful or financially rewarding.

Operations may be affected by natural hazards.

Underwater exploration and recovery operations are inherently difficult and dangerous and may be delayed or suspended by weather, sea conditions or other natural hazards. Further, such operations may be undertaken more safely during certain months of the year than others. We cannot guarantee that we, or the entities we are affiliated with, will be able to conduct exploration, sampling or extractions operations during favorable periods. In addition, even though sea conditions in a particular search location may be somewhat predictable, the possibility exists that unexpected conditions may occur that adversely affect our operations. It is also possible that natural hazards may prevent or significantly delay operations. Seabed mineral extraction work may be subject to interruptions resulting from storms that adversely affect the extraction operations or the ports of delivery. Project planning considers these risks.

We may be unable to establish our rights to resources or items we discover or recover.

We may discover potentially valuable seabed mineral deposits, but we may be unable to get title to the deposits or get the necessary governmental permits to commercially extract the minerals. Mineral deposits may be in controlled waters where the policies and laws of a certain government may change abruptly, thereby adversely affecting our ability to operate in those zones. We have a process for evaluating this risk in our proprietary Global Prospectivity Program.

The market for any objects or minerals we recover is uncertain.

During the time between when a mineral deposit is discovered and the first extracted minerals are sold, world and local prices for the mineral may fluctuate drastically and thereby adversely affect the economics of the mineral project.

We could experience delays in the disposition or sale of minerals or recovered objects.

It may take significant time between when a mineral deposit is discovered and the first extracted minerals are sold. Stakes in the mineral deposits can potentially be sold at an earlier date, but there is no guarantee that there will be readily available buyers at favorable competitive prices.

Legal, political or civil issues could interfere with our marine operations.

Legal, political or civil issues of governments throughout the world could restrict access to our operational marine sites or interfere with our marine operations or rights to seabed mineral deposits. In many countries, the legislation covering ocean exploration lacks clarity or certainty. As a result, when we are conducting projects in certain areas of the world for our own account or on our behalf of a contracting party, we may be subjected to unexpected delays, requests, and outcomes as we work with local governments to define and obtain the necessary permits and to assert our claims over assets on the seafloor bottom. Our vessel, equipment, personnel and or cargo could be seized or detained by government authorities. We may have to work with different units of a government, and there may be a change of government representatives over time. This may result in unexpected changes or interpretations in government contracts and legislation.

We may be unable to get permission to conduct exploration, excavation, or extraction operations.

It is possible we will not be successful in obtaining the necessary permits to conduct exploration or excavation and extraction operations. In addition, permits we obtain may be revoked or not honored by the entities that issued them. In addition, certain governments may develop new permit requirements that could delay new operations or interrupt existing operations.

Changes in our business strategy or restructuring of our businesses may increase our costs or otherwise affect the profitability of our businesses.

As changes in our business environment occur, we may need to adjust our business strategies to meet these changes or we may otherwise find it necessary to restructure our operations or particular businesses or assets. When these changes or events occur, we may incur costs to change our business strategy and may need to write down the value of assets or sell certain assets. In any of these events our costs may increase, and we may have significant charges associated with the write-down of assets. Discontinuing the use of a multi-year charter of a ship may result in large one-time costs to cover any penalties or charges to put the ship back into its original condition.

We may be unsuccessful in raising the necessary capital to fund operations and capital expenditures.

Our ability to generate cash inflows is dependent upon our ability to provide mineral exploration and development services to our subsidiaries and other subsea mineral companies or monetize mineral rights. However, we cannot guarantee that the sales and other cash sources will generate sufficient cash inflows to meet our overall cash requirements. If cash inflows are not sufficient to meet our business requirements, we will be required to raise additional capital through other financing activities. While we have been successful in raising the necessary funds in the past, there can be no assurance we can continue to do so in the future.

We depend on key employees and face competition in hiring and retaining qualified employees.

Our employees are vital to our success, and our key management and other employees are difficult to replace. We currently do not have employment contracts with the majority of our key employees. We may not be able to retain highly qualified employees in the future which could adversely affect our business.

We may continue to experience significant losses from operations.

We have experienced a net loss in every fiscal year since our inception except for 2004. Our net losses were $10.0 million in 2021, $14.8 million in 2020 and $10.4 million in 2019. Even if we do generate operating income in one or more quarters in the future, subsequent developments in our industry, customer base, business or cost structure or an event such as significant litigation or a significant transaction may cause us to again experience operating losses. We may not become profitable for the long-term, or even for any quarter.

Technological obsolescence of our marine assets or failure of critical equipment could put a strain on our capital requirements or operational capabilities.

We employ state-of-the-art technology including side-scan sonar, magnetometers, ROVs, and other advanced science and technology to perform seabed mineral exploration and to locate and recover shipwrecks at depths previously unreachable in an economically feasible manner. Although we try to maintain back-ups on critical equipment and components, equipment failures may require us to delay or suspend operations. Also, while we endeavor to keep marine equipment in excellent working condition and current with all available upgrades, technological advances in new equipment may provide superior efficiencies compared to the capabilities of our existing equipment, and this could require us to purchase new equipment which would require additional capital.

We may not be able to contract with clients or customers for marine services or syndicated projects.

In the past, from time to time, we have earned revenue by chartering out vessels, equipment and crew and providing marine services to clients or customers. Even if we do contract out our services, the revenue may not be sufficient to cover administrative overhead costs. While the operational results of these syndicated projects are generally successful, the clients or customers may not be willing or financially able to continue with syndicated projects of this type in the future. Failure to secure such revenue producing contracts in the future may have a material adverse impact on our revenue and operating cash flows. We may take payment for these services in the form of cash, equity in the client's company, or a financial interest in the tenement areas.

The issuance of shares at conversion prices lower than the market price at the time of conversion and the sale of such shares could adversely affect the price of our common stock.

Some of our outstanding shares may have been acquired from time to time upon conversion of convertible notes at conversion prices that are lower than the market price of our common stock at the time of conversion. In the past, Odyssey has issued debt obligations that could be converted into common shares at prices below the current market price. Conversion of the notes at conversion prices that are lower than the market price at the time of conversion and the sale of the shares issued upon conversion could have an adverse effect upon the market price of our common stock.

Investments in subsea mineral exploration companies may prove unsuccessful.

We have invested in marine mineral companies that to date are still in the exploration phase and have not begun to earn revenue from operations. We may or may not have control or input on the future development of these businesses. There can be no assurance that these companies will achieve profitability or otherwise be successful in capitalizing on the mineralized materials they intend to exploit.

We may be subject to short selling strategies.

Short sellers of our stock may be manipulative and may attempt to drive down the market price of our common stock. Short selling is the practice of selling securities that the seller does not own but rather has, supposedly, borrowed from a third party with the intention of buying identical securities back at a later date to return to the lender. The short seller hopes to profit from a decline in the value of the securities between the sale of the borrowed securities and the purchase of the replacement shares, as the short seller expects to pay less in that purchase than it received in the sale. As it is therefore in the short seller's best interests for the price of the stock to decline, many short sellers (sometime known as "disclosed shorts") publish, or arrange for the publication of, negative opinions regarding the relevant issuer and its business prospects to create negative market momentum and generate profits for themselves after selling a stock short. Although traditionally these disclosed shorts were limited in their ability to access mainstream business media or to otherwise create negative market rumors, the rise of the Internet and technological advancements regarding document creation, videotaping and publication by weblog ("blogging") have allowed many disclosed shorts to publicly attack a company's credibility, strategy and veracity by means of so-called "research reports" that mimic the type of investment analysis performed by large Wall Street firms and independent research analysts. These short attacks have, in the past, led to selling of shares in the market, on occasion in large scale and broad base. Issuers who have limited trading volumes and are susceptible to higher volatility levels than large-cap stocks, can be particularly vulnerable to such short seller attacks. These short seller publications are not regulated by any governmental, self-regulatory organization or other official authority in the U.S., are not subject to certification requirements imposed by the Securities and Exchange Commission and, accordingly, the opinions they express may be based on distortions or omissions of actual facts or, in some cases, fabrications of facts. In light of the limited risks involved in publishing such information, and the enormous profit that can be made from running just one successful short attack, unless the short sellers become subject to significant penalties, it is more likely than not that disclosed short sellers will continue to issue such reports.

Some of our equipment or assets could be seized or we may be forced to sell certain assets.

We have pledged certain assets, such as equipment and shares of subsidiaries, as collateral under our loan agreements. Some suppliers have the ability to seize some of our assets if we do not make timely payments for the services, supplies, or equipment that they have provided to us. If we were unable to make payments on these obligations, the lender or supplier may seize the asset or force the sale of the asset. The loss of such assets could adversely affect our operations. The sale of the asset may be done in a manner and under circumstances that do not provide the highest cash value for the sale of the asset.

We could be delisted from the NASDAQ Capital Market.

Our common stock is listed on the NASDAQ Capital Market, which imposes, among other requirements, a minimum bid requirement. The closing bid price for our common stock must remain at or above $1.00 per share to comply with NASDAQ's minimum bid requirement for continued listing. If the closing bid price for our common stock is less than $1.00 per share for 30 consecutive business days, NASDAQ may send us a notice stating we will be provided a period of 180 days to regain compliance with the minimum bid requirement or else NASDAQ may make a determination to delist our common stock. Another requirement for continued listing on the NASDAQ Capital Market is to maintain our market capitalization above $35.0 million.

Our failure to maintain compliance with the above-mentioned and other NASDAQ continued listing requirements may lead to the delisting of our common from the NASDAQ Capital Market. Delisting from the NASDAQ Capital Market could make trading our common stock more difficult for investors, potentially leading to declines in our share price and liquidity. If our common stock is delisted by NASDAQ, our common stock may be eligible to trade on an over-the-counter quotation system, where an investor may find it more difficult to sell our stock or obtain accurate quotations as to the market value of our common stock. We cannot assure you that our common stock, if delisted from the NASDAQ Capital Market, will be listed on another national securities exchange or quoted on an over-the counter quotation system.

Our insurance coverage may be inadequate to cover all of our business risks.

Although we seek to obtain insurance for some of our main operational risks, there is no guarantee that the insurance policies that we have are sufficient, that they will be in place when needed, that we will be able to obtain insurance coverage

when desired, that insurance will be available on commercially attractive terms, or that we will be able to anticipate the risks that need to be insured. For example, although we may be able to obtain War Risk coverage for a project at a specific date and location, such insurance may be unavailable at other times and locations. Although we may be able to insure our marine assets for certain risks such as certain possible loss or damage scenarios, we may lack insurance to cover against government seizure or detention of our certain marine assets. Permanent loss or temporary loss of our marine assets and the associated business interruption without commensurate compensation from an insurance policy could severely impact the financial results and operational capabilities of the company.

We may be exposed to cyber security risks.

We depend on information technology networks and systems to process, transmit and store electronic information and to communicate among our locations around the world and among ourselves within our company. Additionally, one of our significant responsibilities is to maintain the security and privacy of our confidential and proprietary information and the personal data of our employees. Our information systems, and those of our service and support providers, are vulnerable to an increasing threat of continually evolving cybersecurity risks. Computer viruses, hackers and other external hazards, as well as improper or inadvertent staff behavior could expose confidential company and personal data systems and information to security breaches. Techniques used to obtain unauthorized access or cause system interruption change frequently and may not immediately produce signs of intrusion. As a result, we may be unable to anticipate these incidents or techniques, timely discover them, or implement adequate preventative measures. With respect to our commercial arrangements with service and support providers, we have processes designed to require third-party IT outsourcing, offsite storage and other vendors to agree to maintain certain standards with respect to the storage, protection and transfer of confidential, personal and proprietary information. However, we remain at risk of a data breach due to the intentional or unintentional non-compliance by a vendor's employee or agent, the breakdown of a vendor's data protection processes, or a cyber-attack on a vendor's information systems or our information systems.

Mining exploration, development and operating have inherent risks.

Mining operations generally involve a high degree of risk. The financing, exploration, development and mining of any of our properties is furthermore subject to a number of macroeconomic, legal and social factors, including commodity prices, laws and regulations, political conditions, currency fluctuations, the ability to hire and retain qualified people, the inability to obtain suitable and adequate machinery, equipment or labor and obtaining necessary services in the jurisdictions in which we may operate. Unfavorable changes to these and other factors have the potential to negatively affect our operations and business. Major expenses may be required to locate and establish mineral reserves and resources, to develop processes and to construct mining and processing facilities at a particular site. Mining, processing, development and exploration activities depend, to one degree or another, on adequate infrastructure. Unusual or infrequent weather phenomena, sabotage, government or other interference could adversely affect our operations, financial condition and results of operations. It is impossible to ensure that the exploration or development programs planned by us will result in a profitable commercial mining operation. Whether precious or base metal or mineral deposit will be commercially viable depends on a number of factors, some of which are: the particular attributes of the deposit, such as the quantity and quality of mineralization ; mineral prices, which are highly cyclical; and government regulations, including regulations relating to prices, taxes, royalties, land tenure, land use, importing and exporting minerals and environmental protection. The exact effect of these factors cannot be accurately predicted, but the combination of these factors may result in not receiving an adequate return on invested capital. There is no certainty that the expenditures to be made by us towards the exploration and evaluation of our projects will result in discoveries or production of commercial quantities of the minerals. In addition, once in production, mineral reserves are finite and there can be no assurance that we will be able to locate additional reserves as its existing reserves are depleted.

We are subject to significant governmental regulations, which affect our operations and costs of conducting our business.

Our exploration operations are subject to government legislation, policies and controls relating to prospecting, development, production, environmental protection, mining taxes and labor standards. In order for us to carry out our activities, various licenses and permits must be obtained and kept current. There is no guarantee that the Company's licenses and permits will be granted, or that once granted will be maintained and extended. In addition, the terms and conditions of such licenses or permits could be changed and there can be no assurances that any application to renew any existing licenses will be approved. There can be no assurance that all permits that we require will be obtainable on reasonable terms, or at all. Delays or a failure to obtain such permits, or a failure to comply with the terms of any such permits that we have obtained, could have a material adverse impact on our operations. We may be required to contribute to the cost of providing the required infrastructure to facilitate the development of our properties and will also have to obtain and comply with permits and licenses that may contain

specific conditions concerning operating procedures, water use, waste disposal, spills, environmental studies and financial assurances. There can be no assurance that we will be able to comply with any such conditions and non-compliance with such conditions may result in the loss of certain of our permits and licenses on properties, which may have a material adverse effect on us. Future taxation of mining operators cannot be predicted with certainty so planning must be undertaken using present conditions and best estimates of any potential future changes. There is no certainty that such planning will be effective to mitigate adverse consequences of future taxation on us.

We may not be able to obtain all required permits and licenses to place any of our properties into production.

Our current and future operations, including development activities and commencement of production, if warranted, require permits from governmental authorities and such operations are and will be governed by laws and regulations governing prospecting, development, mining, production, exports, taxes, labor standards, occupational health, waste disposal, toxic substances, environmental protection, mine safety and other matters. Companies engaged in mineral property exploration and the development or operation of mines and related facilities generally experience increased costs, and delays in production and other schedules as a result of the need to comply with applicable laws, regulations and permits. We cannot predict if all permits which we may require for continued exploration, development or construction of mining facilities and conduct of mining operations will be obtainable on reasonable terms, if at all. Costs related to applying for and obtaining permits and licenses may be prohibitive and could delay our planned exploration and development activities. Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. Parties engaged in mining operations may be required to compensate those suffering loss or damage by reason of the mining activities and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations. Amendments to current laws, regulations and permits governing operations and activities of mining companies, or more stringent implementation thereof, could have a material adverse impact on our operations and cause increases in capital expenditures or production costs or reduction in levels of production at producing properties or require abandonment or delays in development of new mining properties

Calculations of mineral resources and mineral reserves are estimates only and subject to uncertainty.

The estimating of mineral resources and mineral reserves is an imprecise process and the accuracy of such estimates is a function of the quantity and quality of available data, the assumptions used and judgments made in interpreting engineering and geological information and estimating future capital and operating costs. There is significant uncertainty in any reserve or resource estimate, and the economic results of mining a mineral deposit may differ materially from the estimates as additional data are developed or interpretations change.

Estimated mineral resources and mineral reserves may be materially affected by other factors.

In addition to uncertainties inherent in estimating mineral resources and mineral reserves, other factors may adversely affect estimated mineral resources and mineral reserves. Such factors may include but are not limited to metallurgical, environmental, permitting, legal, title, taxation, socio-economic, marketing, political, gold prices, and capital and operating costs. Any of these or other adverse factors may reduce or eliminate estimated mineral reserves and mineral resources and could have a material adverse effect on our business, prospects, results of operations, cash flows, financial condition and corporate reputation.

ITEM 1B.UNRESOLVED STAFF COMMENTS

None.

ITEM 2.PROPERTIES

Corporate Office

We maintain our corporate offices in Tampa, Florida where we lease approximately 6,000 square feet of office space. We currently do not own any buildings or land. We believe our current leased facility is sufficient for our foreseeable needs.

Don Diego Phosphorite Project

Summary

We have one material mining project, the Don Diego Phosphorite Project, which is located in the Mexican Exclusive Economic Zone (the "Mexican EEZ") offshore Baja California Sur, Mexico in the Pacific Ocean. The exclusive mining concessions for the Don Diego Phosphorite Project are held by Exploraciones Oceánicas S. de R.L. de CV ("ExO"), a Mexican company in which we hold, through other subsidiaries, a 56.3% interest. The Don Diego Phosphorite Project is classified as an exploration stage property because it currently has no mineral reserves disclosed. The primary concession (Don Diego West Phosphorite Deposit) was granted in 2012, and rights for the two additional adjacent concessions (Don Diego Norte and Don Diego Sur) were acquired in 2014.

Qualified Person

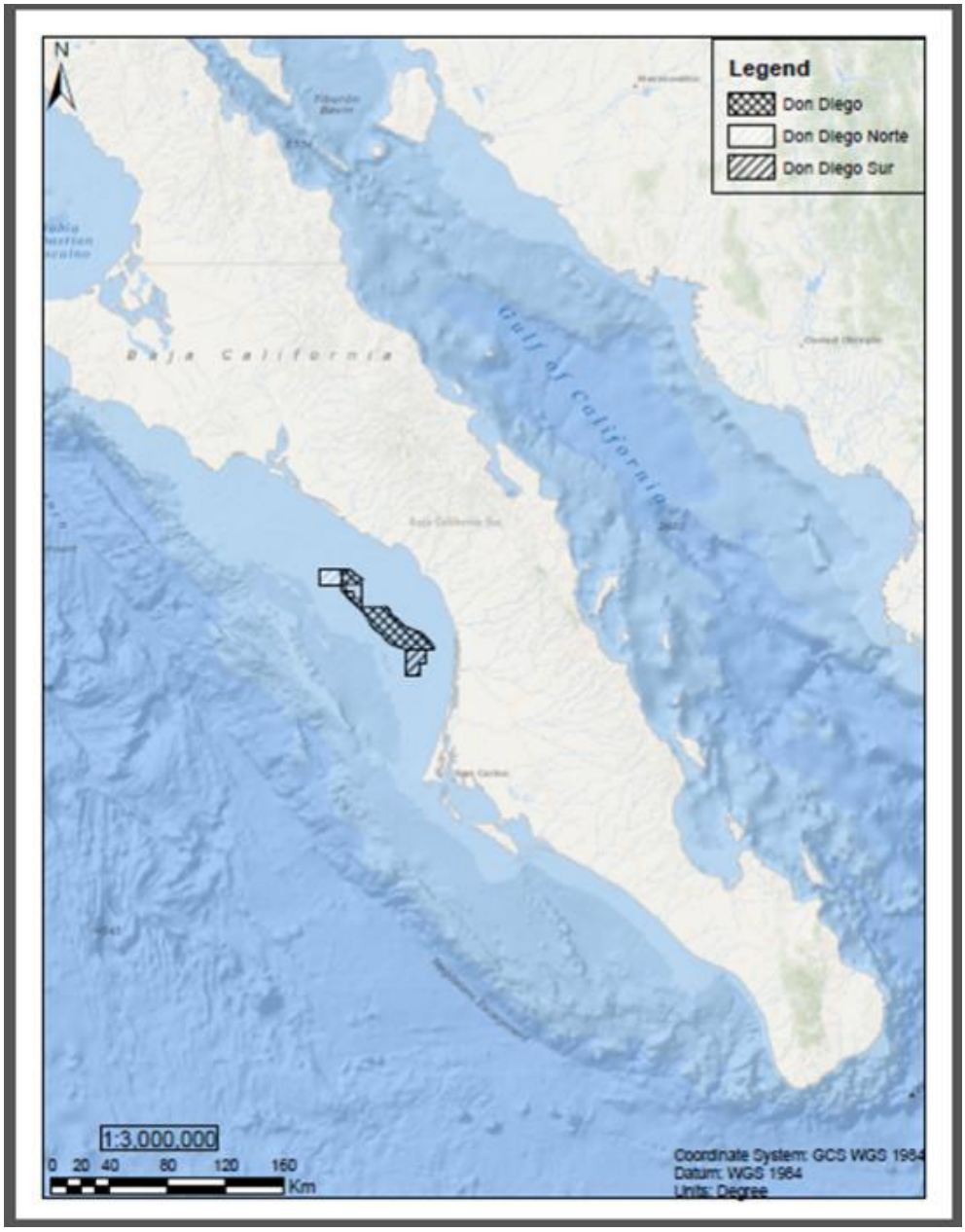
The scientific and technical disclosures about the Don Diego Phosphorite Project in this annual report on Form 10-K have been reviewed and approved by Henry J. Lamb of Mineral Resource Associates. Mr. Lamb is a professional geologist with 40 years' experience in the exploration, evaluation, development, maintenance, and operation of phosphate rock mines and beneficiation plants in multiple countries. Mr. Lamb is a "qualified person" as defined by Regulation S-K Subpart 1300 and NI 43-101. For a description of the key assumptions, parameters and methods used to estimate mineral resources included in this Form 10-K, as well as data verification procedures and a general discussion of the extent to which the estimates may be affected by any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors, please review the 43-101 Technical Report for the Don Diego Phosphorite Project attached as Exhibit 96.01 to this annual report on Form 10-K.

Technical Report

The information that follows relating to the Don Diego Phosphorite Project is, for the most part, derived from, and, in some instances, may be extracted from, the 43-101 technical report entitled "Technical Report: Revised Assessment of the Don Diego West Phosphorite Deposit, Mexican Exclusive Economic Zone (EEZ)" (the "Don Diego Technical Report"), with an effective date of June 30, 2014. Readers should consult the Don Diego Technical Report to obtain further information regarding the Don Diego Phosphorite Project, which is available at www.sec.gov and attached as Exhibit 96.01 to this annual report on Form 10-K. The Don Diego Technical Report is not incorporated by reference into this annual report on Form 10-K. Following the submission of the 2014 Technical Report, additional samples from the newly acquired Don Diego Norte concession were analyzed by Mr. Lamb and results were provided to us. No analysis has been done on the Don Diego Sur concession. The NI 43-101 Technical Report and additional updates pertaining to the Norte concession were completed using standard guidelines and protocols.

Location and Brief Description

The Don Diego Phosphorite Project concession area is a sedimentary marine phosphorite deposit located in the Mexican EEZ offshore Baja California Sur, Mexico in the Pacific Ocean. The property is located using a multi-point polygonal property demarcation bounded by latitudes 26.1°, 25.60°, and longitudes -112.12°, -112.80° WGS 1984. The property is roughly 20 to 45 kilometers from shore. Following is a map denoting the three concessions in Don Diego in relation to Baja California Sur, Mexico.



Infrastructure and Access

There is no material infrastructure located on the property where the concessions are located. Access to the site is by sea-going vessels dispatched from various nearby ports of opportunity.

Project engineering anticipates use of existing dredging technology to recover the phosphorite ore, including a trailer suction hopper dredger, and on-site mechanical beneficiation using a floating production and storage platform to produce phosphate rock concentrate.

Description of Concessions

Total concessions encompass 1,147 km^2 of seafloor at a water depth of approximately 80 meters and consist of three concessions in total (see the previous map). The concessions were granted to ExO by the Mexican Secretary of Economy, General Coordination of Mining, and are valid for 50 years, with an option for a 50-year extension. The primary concession was granted in 2012, and rights for the other two concessions (Norte and Sur) were acquired thereafter in 2014. To commence further operations on the Don Diego Phosphorite Project, ExO must obtain approval of its Environmental and Social Impact Assessment ("ESAI") from the Mexican Secretariat of Environment and Natural Resources. See ExO Phosphate Project in the above ITEM 1. BUSINESS for additional information.

The property is subject to rents, fees and other payments to the Government of Mexico or its designated government ministry or agency. The anticipated annual obligations for each of the years in the three-year period ending December 31, 2024 are set forth in the table below.

Primary Concession

Year	Area (Hectares)	Annual Rent, MxN Pesos, owed semesterly
2022	80,050.5	30,236,658
2023	80,050.5	The above is based on 188.86 MxN per hectare per semester. 2023 will be a similar rate but increase by some inflationary factor e.g. increase the rate per hectare by about 5%
2024	80,050.5	The above is based on 188.86 MxN per hectare per semester. 2024 will be a similar rate but increase by some inflationary factor e.g. increase the rate per hectare by about 5%

Norte Concession

Year	Area (Hectares)	Annual Rent, Mx Pesos, owed semesterly
2022	14,300	3,069,352
2023	14,300	Will be based on 107.32 MxN per hectare per semester, with an increase in this rate from inflation
2024	14,300	Will be based on 188.86 MxN per hectare per semester, with an increase in this rate from inflation

Sur Concession

Year	Area (Hectares)	Annual Rent, Mx Pesos, owed semesterly
2022	20,425	4,384,022
2023	20,425	Will be based on 107.32 MxN per hectare per semester, with an increase in this rate from inflation
2024	20,425	Will be based on 188.86 MxN per hectare per semester, with an increase in this rate from inflation

Work Completed

The Don Diego Phosphorite Project is in the exploration stage with sufficient data to confirm the geological continuity of the deposit and the estimation of measured, indicated and inferred resource tonnes of resource. ExO, through exploration operations conducted by Odyssey, explored the area, characterized the environmental baseline to enable drafting of the ESAI, and acquired approximately 200 vibracore samples for assay. These cores were split into over 800 individual strata core units each of approximately 1 meter length. The cores were assayed at Florida Industrial and Phosphate Research Institute in Bartow, Florida under the guidance of Mr. Lamb.

Previous Operations

The mineral concession granted by the Government of Mexico to ExO is believed to be the first for the subject property. Nearby concessions have been granted to Innophos Holdings, Inc. ("Innophos") and PhosMex Corporation ("PhosMex") that are adjacent to and are a window within the Don Diego mineral concession. Innophos may have conducted an exploration program on its adjacent property of an estimated 13,474 hectares. However, the details and any findings have not been distributed in the public domain. There is no evidence of significant mineral exploration activities within the concession area held by PhosMex.

Assessment Results

The Don Diego Technical Report describes the exploration program for the Don Diego Mineral Concession as the most detailed phosphorite production-based exploration program to be executed in the Offshore Baja California Phosphorite District. The exploration concept was to explore the area using known technologies applied to the marine environment to locate a suitable phosphorite deposit capable of sustaining the production of 3.0 to 3.5 million tonnes per year of phosphate rock concentrates with suitable chemical characteristics for the production of phosphoric acid using one of the established wet processes for a period of not less than 20 years.

The keys conclusions of the Don Diego Technical Report, which covered a portion of the original primary concession area granted in 2012 are:

- The Don Diego Mineral Concession contains an enriched, sedimentary marine phosphorite with the potential to yield a commercial phosphate rock concentrate using known procedures for mining (dredging) and mineral processing (washing, sizing, attrition, flotation and density separation).
- The measured phosphorite resource for the Don Diego West Phosphorite Deposit is estimated at 106.9 million tonnes at 18.44% P_2O_5 contained within an area of 27.83 km^2. The average overburden thickness is 1.04 meters overlying an average of 2.75 meters of phosphorite.
- The indicated phosphorite resource for the Don Diego West Phosphorite Deposit is estimated at 220.3 million ore tonnes at 18.71% P_2O_5 contained within an area of 55.49 km^2. The average overburden thickness is 1.16 meters overlying an average of 2.82 meters of phosphorite.
- The inferred phosphorite resource for the Don Diego West Phosphorite Deposit is estimated at 166.4 million ore tonnes at 18.89% P_2O_5 contained within an area of 40.74 km^2. The average overburden thickness is 1.34 meters overlying an average of 2.97 meters of phosphorite.
- The geologic boundaries of the Don Diego West Phosphorite Deposit appear to be open to the northwest, to the southeast, at depth and to the west. Future drilling results coupled with appropriate sampling and laboratory testing have the potential to further define the geologic continuity of the deposit and increase the mineral resource estimate.
- Preliminary assaying and metallurgical testing of the core samples at approximately one-meter intervals indicates the potential to produce a phosphate rock concentrate at 28% to 30% P_2O_5 with a favorable CaO/P_2O_5 ratio of 1.5 to 1.55 and a Minor Element Ratio (MER) of 0.07 to 0.08. The chemical analysis suggests that the concentrate would be suitable for the production of phosphoric acid using the wet process methods.

- Additional analysis was performed by the qualified person on the Norte concession. Conclusions were reported as below and are in addition to the Technical Report; the table reported in the *Phosphorite Resources* subsection considers the overall reported resource statistics in the primary concession plus the Norte concession.
    - The measured phosphorite resource for the Don Diego Norte Concession is estimated at 8 million tonnes at 14.95% P_2O_5 contained within an area of 2.25 km^2. The average overburden thickness is 0.89 meters overlying an average of 2.51 meters of phosphorite.
    - The indicated phosphorite resource for the Don Diego Norte Concession is estimated at 23.3 million ore tonnes at 15.04% P_2O_5 contained within an area of 6.58 km^2. The average overburden thickness is 0.89 meters overlying an average of 2.49 meters of phosphorite.
    - The inferred phosphorite resource for the Don Diego Norte Concession is estimated at 63.4 million ore tonnes at 14.94% P_2O_5 contained within an area of 17.89 km^2. The average overburden thickness is 0.87 meters overlying an average of 2.53 meters of phosphorite.

Material Assumptions, Parameters, and Methods

The Don Diego Technical Report (Section 17.3) sets forth the material assumptions, parameters, and methods used to estimate phosphorite resources as follows:

- The category estimates are based on 199 drill holes representing 746.6 meters of drilling and 761 sample intervals. Based on laboratory physical and chemical tests results, the raw data was calculated for each sample interval (strata) and the quantity and quality of each component was reported. Detailed size distribution data was summarized into coarse waste (+20 mesh), flotation feed (-20+150 mesh) and fine waste (-150 mesh) and the estimated quantity and quality for each was reported.
- Flotation tests have established certain parameters (concentrate %P_2O_5 and insol, tailings % P_2O_5 and insol, and recovery factors) from a broad geographic range of sample locations at various depths and ore grades. These parameters were used to establish formulae for estimating the concentrate tonnes, % P_2O_5 and insol for each strata containing an acceptable ore quantity and quality. [Based on critical physical and chemical characteristics that are directly correlated with Capital Investment and Operating Cost, each strata was classified as waste, marginal and mineable. Waste strata having a high Ore to Concentrate tonnage Ratio, a high Flotation Feed to Concentrate tonnage Ratio, or a low Concentrate P_2O_5 content and lying above a marginal or mineable strata is identified as overburden. The overburden could be removed and discarded in a non-mineralized (sterile) area prior to mining and processing the underlying phosphorite strata. The marginal strata will have a lower economic value but when blended with the mineable strata in a well-defined mine plan could make a positive economic contribution. The mineral strata have favorable physical, chemical and economic characteristics.
- The resource calculation procedure is based on the geologic data and laboratory testing of the core samples obtained from the drilling program, the reduction of the data into strata calculation reports and compilation of the marginal and mineable strata into mineable hole composites.
- Using a conventional polygonal area of influence to weight each mineable hole, the measured, indicated and inferred phosphorite resources were calculated. The chemical characteristics are weight averaged with the tonnes as the weighting factor.
- Measured resources are based on those holes within the transverse cross-sections where the distance between drill holes is approximately 500 meters and the geologic continuity along the primary axis is considered to be 500 meters. Thus, the area of influence is 0.25 km^2.
- Indicated resources have an area of influence for each drill hole equal to 1.0 km^2 (500 meters by 2,000 meters). The area of influence for the inferred resources is variable and typically extends midway between transect lines.
- The resources have been estimated as if the final product is to be a feedstock for a wet process phosphoric acid plant to produce end product phosphoric acid for the fertilizer market. The resources are subject to modification based on the requirements of the end user process such as direct application or SSP (single superphosphate).

Description of Sampling Methods

Piston Core and One-Pass Samples. For each location two piston cores were collected, one was archived while the other was split, photographed and described. The one-pass core barrel did not have liners; therefore, the material was hydraulically extruded into a core tray. For each one-pass core, the core was photographed and described. For both types of samples, visual descriptions used a 10-power hand lens and grain size card to determine grain size, sorting, roundness, presence of pelletal phosphorite, and shell fragment size. Colors were determined using Munsell soil color charts. Benthic infauna found within the samples were photographed, measured and identified. The archived core liner was capped and secured on both ends and labeled with appropriate identification. The archived piston core tubes, containing the undisturbed samples, were stored until returning to port (San Diego, California) where the samples were securely packaged, with a chain of custody identifying the contents of each package, and shipped by a commercial carrier to the Florida Industrial and Phosphate Research Institute (FIPR) laboratory in Bartow, Florida.

Rossfelder Core Samples. Due to the recovery length, the Rossfelder core liners, containing the recovered samples, were cut into 1.0 to 1.2-m sections and point sampled. Visual descriptions used a 10-power hand lens and grain size card to determine grain size, sorting, roundness, presence of pelletal phosphorite, and shell fragment size. Colors were determined using Munsell soil color charts. Benthic infauna found within the samples were photographed, measured and identified. The 1-m core liner sections were capped and secured on both ends, labeled with appropriate identifiers, and shipped by a commercial carrier to the FIPR laboratory. Only the samples from the Rossfelder Vibracore were used in the preparation of the Don Diego West Phosphorite Deposit resource estimate.

ROV Samples. Visual descriptions used a 10-power hand lens and grain size card to determine grain size, sorting, roundness, presence of pelletal phosphorite, and shell fragment size. Colors were determined using a Munsell soil color chart. Any benthic infauna found within the samples were photographed, measured and identified. No ROV samples were archived.

Phosphorite Resources

The table below sets forth, as of December 31, 2021, information regarding the measured, indicated, and inferred phosphorite resources associated with the Don Diego Phosphorite Project.. The 588 million tonnes is comprised of about 494 million ore tonnes from the main concession and about 94 million ore tonnes from the Norte concession. No assay has been conducted on samples from the Sur concession.

Phosphorite Resources	Ore (in millions of tonnes)	Average P_2O_5%	Average Overburden Thickness (meters)	Average Phosphorite (meters)	Area (km^2)	Area of Drill Hole Influence (max m^2)
Measured phosphorite	114.9	18.2%	1.03	2.73	30.08	500 by 500
Indicated phosphorite	243.6	18.4%	1.13	2.19	62.07	500 by 2,000
Total measured and indicated	358.4	18.3%	1.10	2.77	92.15	
Inferred phosphorite	229.9	17.8%	1.20	2.84	58.63	>500 by 2,000
Total deposit	588.3	18.1%	1.14	2.80	150.80	

Internal Controls

Assay was overseen by a qualified person and performed in line with the procedures of the Association of Fertilizer and Phosphate Chemists (AFPC) at an experienced laboratory. Quality assurance and control measures included duplicate assays and the use of both blank and reference materials at select intervals. Uniform sample preparation, digestion, and spectral analysis procedures were followed. Measures are detailed is sections 13 and 14 and Appendix G in the attached 43-101 Technical Report for the Don Diego Phosphorite Project as Exhibit 96.01 to this annual report on Form 10-K.

Other exploration projects

In *Part 1 – Item 1 Business*, we include projects: LIHIR Subsea Gold (Lihir), CIC Project and Antigua and Barbuda (Antigua) as active projects. These are exploration targets that are in the early stages of validation. As discussed in NOTE G, we are investors in the CIC Project. Even though we have an investment position in CIC LTD (CIC), CIC is not consolidated into our consolidated financial statements of Odyssey Marine Exploration, Inc. and subsidiaries. Indicated and referred mineral resources have not been identified for the LIHIR and Antigua projects. A qualified person has not been engaged for the LIHIR

and Antigua projects since they would be unable to issue any type of accurate technical report based on the limited data available. Therefore, we are of the position LIHIR, CIC and Antigua projects do not fall within the scope of the New Final Rule requiring mining disclosures as adopted by the Securities and Exchange Commission on October 31, 2018.

ITEM 3. LEGAL PROCEEDINGS

The Company may be subject to a variety of claims and suits that arise from time to time in the ordinary course of business. We are not a party to any litigation as a defendant where a loss contingency is required to be reflected in our consolidated financial statements.

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

Price Range of Common Stock

Our common stock is listed on the NASDAQ Capital Market under the symbol OMEX. The following table sets forth the high and low sale prices for our common stock during each quarter presented.

	Price	
	High	Low
Quarter Ended		
March 31, 2020	$4.95	$2.10
June 30, 2020	$5.31	$3.17
September 30, 2020	$8.49	$3.84
December 31, 2020	$8.15	$6.12
Quarter Ended		
March 31, 2021	$8.69	$6.35
June 30, 2021	$7.40	$5.72
September 30, 2021	$7.94	$5.11
December 31, 2021	$7.00	$4.93

Approximate Number of Holders of Common Stock

The number of record holders of our common stock at January 18, 2022 was approximately 150. This does not include approximately 7,100 stockholders that hold their stock in accounts included in street name with broker/dealers.

Dividends

Holders of our common stock are entitled to receive such dividends as may be declared by our Board of Directors. No dividends have been declared with respect to our common stock and none are anticipated in the foreseeable future.

Unregistered Sales of Equity Securities

There were no unregistered sales of equity securities of the Company's common stock during the year ended December 31, 2021.

Issuer Purchases of Equity Securities

There were no repurchases of shares of the Company's common stock during the year ended December 31, 2021.

ITEM 6. [RESERVED]

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

The following discussion and analysis is intended to provide a narrative of our financial results and an evaluation of our results of operations and financial condition. The discussion should be read in conjunction with our consolidated financial statements and notes thereto. A description of our business is discussed in Item 1 of this report which contains an overview of our business as well as the status of our ongoing project operations.

Results of Operations

The dollar values discussed in the following tables, except as otherwise indicated, are approximations to the nearest $1,000,000 and therefore do not necessarily sum in columns or rows. For more detail refer to the Financial Statements and Supplementary Data in Item 8. The tables identify years 2021, 2020 and 2019, all of which included a twelve-month period ended December 31.

2021 Compared to 2020

Increase/(Decrease) (Dollars in millions)	2021	2020	2021 vs. 2020 $	2021 vs. 2020 %
Total revenue	$ 0.9	$ 2.0	$(1.1)	54.8%
Operations and research	9.6	10.9	(1.4)	12.6%
Marketing, general and administrative	6.3	3.7	2.6	68.6%
Total operating expenses	$ 15.9	$ 14.7	$ 1.2	8.2%
Total other income (expense)	$ (1.2)	$ (8.5)	$(7.3)	86.1%
Income tax benefit (provision)	$ 0.0	$ 0.0	$ 0.0	0.0%
Non-controlling interest	$ 6.2	$ 6.3	$(0.1)	1.7%
Net income (loss)	$(10.0)	$(14.8)	$(4.9)	32.8%

Revenue

The revenue generated in each period was a result of performing oceanic research, project administration and search and recovery operations for our customers and related parties. Total revenue in the current year was $0.9 million, a $1.1 million decrease compared to the same period a year ago. One company to which we provided these services in both years was a deep-sea mineral exploration company, CIC, which we consider to be a related party since it is owned and controlled by our past Chairman of the Board (see NOTE J). The primary reason for the $1.1 million reduction was that we were no longer engaged on another project since the latter half of 2020. This project accounts for $0.6 million of the reduction. In 2020 we had other marine search engagements for which we earned $0.5 million in revenue. These other marine engagements did not recur in this current year.

Cost and Expenses

Marketing, general and administrative expenses primarily include all costs within the following departments: Executive, Finance & Accounting, Legal, Information Technology, Human Resources, Marketing & Communications, Sales and Business Development. Costs increased $2.6 million to $6.3 million for the year ended December 31, 2021 compared to $3.7 million from the same period in the prior year. The items contributing to this $2.6 million increase were an increase of $0.2 million in employee benefits and compensation related, and an increase of non-cash long term incentive share-based compensation of $0.8 million. Legal fees increased by $0.2 million which is primarily related to supporting the expansion of our seafloor minerals portfolio. The remaining $1.4 million was due to a reduction in the discretionary incentive reserve during the prior year resulting from management's decision to not pay certain discretionary incentives.

Operations and research expenses are primarily focused around deep-sea mineral exploration which includes minerals research, scientific services, marine operations and project management. Operations and research expenses decreased by $1.4 million from 2020 to 2021 primarily as a result of the following items: (i) a $0.3 million decrease in litigation financed costs directly associated with our NAFTA litigation and (ii) a $0.8 million decrease in marine services technical contracted labor in direct correlation with the reduction in revenue contracts that are nonrecurring in 2021 and (iii) the current year ended December 31, 2021 includes a gain on sale of equipment of $0.3 million.

Other Income or Expense

Other income and expense was $1.2 million in net expenses and $8.5 million in net expenses for 2021 and 2020, respectively, resulting in a net expense decrease of $7.3 million. This variance was attributable to a $1.2 million decrease from a $0.8 million prior year loss on debt extinguishment to a current year gain of $0.4 million on debt extinguishment. The prior year $0.8 million loss was due to fair value accounting on a refinancing of a loan with a creditor and the current year gain was due to the Small Business Administration forgiving our $0.4 million Payroll Protection Program loan. The other items were a

decrease of $0.7 million in derivative fair value expense of our hybrid debt instrument that only existed in 2020, a $3.9 million increase in interest expense mainly attributable to our NAFTA litigation funding, a $4.1 million increase in other income due to removing the balance of our deferred income items from our balance sheet (see NOTE K) and a gain of $5.2 million related to a debt settlement agreement with a creditor that occurred in October 2021, see NOTE H – LOANS PAYABLE (Note 13 – Monaco) for further detail.

Income Taxes and Non-Controlling Interest

We did not incur any taxes in 2021, 2020 or 2019.

Starting in 2013, we became the controlling shareholder of Oceanica. Our financial statements thus include the financial results of Oceanica and its subsidiary, ExO. Except for intercompany transactions that are fully eliminated upon consolidation, Oceanica's revenues and expenses, in their entirety, are shown in our consolidated financial statements. The share of Oceanica's net losses corresponding to the equity of Oceanica not owned by us is subsequently shown as the "Non-Controlling Interest" in the consolidated statements of operations. The non-controlling interest adjustment in the year ended December 31, 2021 was $6.2 million as compared to $6.3 million for the same period in 2021. The substance of these amounts is primarily due to the compounding of interest on intercompany debt and other standard operating costs.

Liquidity and Capital Resources

(Dollars in thousands)	2021	2020
Summary of Cash Flows:		
Net cash (used) by operating activities	$(5,303)	$ (9,287)
Net cash provided by investing activities	323	—
Net cash provided by financing activities	1,092	15,237
Net increase (decrease) in cash and cash equivalents	$(3,888)	$ 5,950
Beginning cash and cash equivalents	6,163	213
Ending cash and cash equivalents	$ 2,275	$ 6,163

Discussion of Cash Flows

Net cash used by operating activities for the calendar year of 2021 was $5.3 million. This represents an approximate $3.5 million decrease in use of funds when compared to the use of $9.3 million in the same period of 2020. The current year net cash used by operating activities reflected a net loss before non-controlling interest of $16.1 million and is adjusted primarily by non-cash or non-operating items of $8.8 million, which primarily includes an investment in unconsolidated entity of $0.9 million, share-based compensation of $1.2 million, debt forgiveness of $0.4 million, a gain on sale of equipment of $0.3 million, an adjustment to deferred income of $3.8 million and a gain on the debt settlement agreement of $5.2 million. Other operating activities resulted in an increase in working capital of $19.7 million. This $19.7 million increase includes a $13.7 million increase to accrued expenses, an increase of $6.3 million to accounts payable and a decrease of $0.3 million to other assets and accounts receivable in 2021. The increase to accrued expenses and accounts payable is predominantly related to our NAFTA financed litigation as it pertains to standard litigation payables and accrued interest associated with the litigation financing.

Net cash used by operating activities for 2020 was $9.3 million. This represents a $3.8 million increase in use of funds when compared to the use of $5.4 million in the same period of 2019. The net cash used by operating activities reflected a net loss before non-controlling interest of $21.1 million offset in part by non-cash items of $1.0 million which primarily includes loss on debt extinguishment of $0.8 million, investment in unconsolidated entity of $0.9 million, the fair-value of hybrid-debt accounting of $0.7 million and other which includes items such as depreciation and debt discount accretion for $0.4 million. Other operating activities resulted in an increase in working capital of $2.4 million compared to 2019. Changes to accrued expenses, accounts receivable, accounts payable and other assets in 2020 comprised the $2.4 million. The December 31, 2020 accounts payable balance of $4.1 million is comprised of: a) $3.3 million which pertains to four accounts. These accounts are not related to current operations and are not expected to be settled with cash, b) $0.5 million for our NAFTA litigation and will be funded from our litigation financing facility and c) $0.3 million of standard operating payables that will be settled in the normal course of business.

Cash flows provided by investing activities for the calendar year 2021 were $322,988, which is net of $19,137 of equipment purchases of a marine asset and computer and cash proceeds from the sale of equipment of $342,125.

There were no cash flows from investing activities in 2020.

Cash flows provided by financing activities for the calendar year 2021 were $1.0 million. The $1.0 million is comprised of $0.7 million received from the sale of equity in our subsidiary offset by outflows of $0.5 million for our lease obligation payments and other debt obligation payments. We were reimbursed $1.4 million from our funder related to our NAFTA litigation financed expenses. A $500,000 termination fee was paid in relation to our Termination Agreement (See NOTE H – Note 13).

Cash flows provided by financing activities for 2020 were $15.2 million, which represented a $12.3 million increase over the same period in 2019 of $2.9 million. The current period $15.2 million was comprised of funds received from our NAFTA litigation financing and funds received from the 37 North agreement (NOTE H). We also received funds from the Small Business Administration (SBA) programs for the Payroll Protection Program (PPP) and the Emergency Injury Disaster Loan (EIDL) (NOTE H). These debt proceeds of $3.6 million were offset by $0.2 million of repayments of financed obligations. In August 2020 we sold 2.5 million of our common shares for net-proceeds of $11.3 million (see NOTE L). During December 2020, we sold $800,000 of new equity in one of our controlled subsidiaries to an existing shareholder of that subsidiary.

General Discussion 2021

At December 31, 2021, we had cash and cash equivalents of $2.3 million, a decrease of $3.9 million from the December 31, 2020 balance of $6.2 million. During March 2021, Epsilon Acquisitions LLC converted its indebtedness comprised of $1.0 million of principal and $0.4 million of accrued interest into 411,562 shares of our common stock, and during July 2021, certain creditors converted $1.1 million of our convertible debt and accrued interest of $0.3 million into 283,850 shares of our common stock (See NOTE H). Our litigation funder paid, on our behalf, $5.6 million of amounts due to vendors who are supporting our NAFTA litigation as well as directly reimbursing the Company $1.4 million for expended costs related directly to our NAFTA litigation.

Financial debt of the company, excluding any derivative, discounts, hybrid-debt fair value accounting or beneficial conversion feature components of such, was $42.2 million at December 31, 2021 and $43.2 million at December 31, 2020. During October 2021 we entered into a Termination and Settlement Agreement with Monaco and SMOM which removed $14.5 million of debt principal and accrued interest from our balance sheet. See NOTE H – LOANS PAYABLE (Note 13 – Monaco) for further detail.

Since SEMARNAT initially declined to approve the environmental permit application of our Mexican subsidiary in April 2016 and again in October 2018, notwithstanding that the Superior Court of the Federal Court of Administrative Justice (TFJA) in Mexico nullified SEMARNAT's initial denial, we continue to support the efforts of our subsidiaries and partners to work through the administrative, legal and political process necessary to have the decision reviewed and overturned in the court of the TFJA. On January 4, 2019, we initiated the process to submit a claim against Mexico to arbitration under the investment protection chapter of the North American Free Trade Agreement (NAFTA). On September 4, 2020, we filed our First Memorial with the Tribunal. The First Memorial is the filing that fully lays out our case, witnesses and evidence for the Tribunal. Mexico filed its counter-memorial, which is available on the International Centre for Settlement of Investment Disputes (ICSID) website, on February 23, 2021. On June 29, 2021, we filed our reply to Mexico's counter-memorial. Odyssey's filings are available at www.odysseymarine.com/nafta. The NAFTA's Tribunal hearing took place from January 24 – January 29, 2022. After this evidentiary phase is closed by the Tribunal, deliberations will begin. Odyssey cannot predict the length of these deliberations or when a ruling will be issued, but we remain confident in the merits of our case. See Litigation Financing below regarding the funding of this litigation, see ITEM 1. BUSINESS for further detail.

2020 Compared to 2019

Increase/(Decrease) (Dollars in millions)	2020	2019	2020 vs. 2019 $	2020 vs. 2019 %
Total revenue	$ 2.0	$ 3.1	$(1.0)	33.7%
Operations and research	10.9	7.9	3.0	37.8%
Marketing, general and administrative	3.6	5.5	(1.7)	31.7%
Total operating expenses	$ 14.7	$ 13.4	$ 1.3	9.3%

Increase/(Decrease) (Dollars in millions)	2020	2019	2020 vs. 2019 $	2020 vs. 2019 %
Total other income (expense)	$ (8.5)	$ (5.2)	$ 3.3	64.1%
Income tax benefit (provision)	$ 0.0	$ 0.0	$ 0.0	0.0%
Non-controlling interest	$ 6.3	$ 5.1	$ 1.2	24.1%
Net income (loss)	$(14.8)	$(10.4)	$ 4.4	41.9%

Revenue

The revenue generated in each period was a result of performing oceanic research, project administration and search and recovery operations for our customers and related parties. Total revenue decreased by $1.0 million in 2020 as compared to 2019. The $1.0 million decrease is comprised of a $1.4 million reduction resulting from the long-term project we were engaged on since 2018 having reached its life expectancy during this period offset in part by an increase of $0.4 million increase in marine exploration services.

Cost and Expenses

Marketing, general and administrative expense decreased $1.7 million to $3.6 million in 2020 compared to $5.5 million in 2019. The key items contributing to this $1.7 million decrease was a non-cash decrease of share-based compensation of $0.2 million and a net reduction of $1.2 in employee incentives and employee and director related compensation. The $1.2 million reduction was primarily due to the reduction of the discretionary incentive reserve resulting from management's decision to not pay discretionary incentives until appropriate. We also had a $0.4 million reduction in professional corporate services which includes a reduction of approximately $0.3 million in maritime legal services associated with the HMS *Victory* as well as fees related to legal and in our annual audit function. These decreases were offset in part by a $0.1 million increase split between governmental fees and our corporate liability insurance.

Operations and research expenses increased by $3.0 million from 2019 to 2020 primarily as a result of the following items: (a) a $4.3 million increase in financed professional fees, legal fees, and other expenses directly associated with our NAFTA litigation pursuit, (b) a $1.3 million decrease in marine services operating technical labor costs, (c) a $0.4 million increase in our concession permit fees for our Mexican subsidiary and (d) a $0.4 million decrease in our general operational overhead which includes items such as travel related, insurances, depreciation and rent.

Other Income or Expense

Other income and expense was $8.5 and $5.2 million in net expenses for 2020 and 2019, respectively, resulting in a net expense increase of $3.3 million. This variance was primarily attributable to an increase in interest expense of $3.5 million primarily from our litigation financing agreement (NOTE H), a reduction in debt discount accretion in the amount of $1.0 million, a $0.4 million incremental expense due to the fair value accounting of our hybrid debt instrument (NOTE H), the prior year included an expense of $0.9 million related to the fair value accounting for a warrant inducement related to debt refinancing, a $0.5 million current year expense related to debt extinguishment accounting related to a loan extension, and $0.8 million of other income in 2019 attributable to the extinguishment of deferred revenue that was caused by the 2019 cancelation of the HMS *Sussex* contract.

Income Taxes and Non-Controlling Interest

We did not incur any taxes in 2020, 2019 or 2018.

Starting in 2013, we became the controlling shareholder of Oceanica. Our financial statements thus include the financial results of Oceanica and its subsidiary. Except for intercompany transactions that are eliminated upon consolidation, Oceanica's revenues and expenses, in their entirety, are shown in our consolidated financial statements. The share of Oceanica's net losses corresponding to the equity of Oceanica not owned by us is subsequently shown as the "Non-Controlling Interest" in the consolidated statements of operations. The non-controlling interest adjustment for 2020 was $6.3 million as compared to $5.1 million for 2019. The administrative support has been ongoing in support of the legal process in obtaining the environmental application for our Mexican subsidiary. This increase was mainly attributable to the compounding debt interest on our Mexican subsidiary's balance sheet.

Liquidity and Capital Resources

(Dollars in thousands)	2020	2019
Summary of Cash Flows:		
Net cash (used) by operating activities	$ (9,287)	$(5,444)
Net cash provided by investing activities	—	(16)
Net cash provided by financing activities	15,237	2,876
Net increase (decrease) in cash and cash equivalents	$ 5,950	$(2,584)
Beginning cash and cash equivalents	213	2,797
Ending cash and cash equivalents	$ 6,163	$ 213

Discussion of Cash Flows

Net cash used by operating activities for 2020 was $9.3 million. This represents a $3.8 million increase when compared to the use of $5.4 million in the same period of 2019. The net cash used by operating activities reflected a net loss before non-controlling interest of $21.1 million offset in part by non-cash items of $1.0 million which primarily includes loss on debt extinguishment of $0.8 million, investment in unconsolidated entity of $0.9 million, the fair-value of hybrid-debt accounting of $0.7 million and other which includes items such as depreciation and debt discount accretion for $0.4 million. Other operating activities resulted in an increase in working capital of $2.4 million compared to 2019. Changes to accrued expenses, accounts receivable, accounts payable and other assets in 2020 comprised the $2.4 million. The December 31, 2020 accounts payable balance of $4.1 million is comprised of: a) $3.3 million which pertains to four accounts. These accounts are not related to current operations and are not expected to be settled with cash, b) $0.5 million for our NAFTA litigation and will be funded from our litigation financing facility and c) $0.3 million of standard operating payables that will be settled in the normal course of business.

Net cash used by operating activities for 2019 was $5.4 million, an increase of $1.0 million compared to the same period in 2018. Net cash used by operating activities reflected a net loss before non-controlling interest of $(15.5) million offset in part by non-cash items of $1.7 million which primarily included depreciation and amortization of $0.1 million, note payable interest accretion of $0.8 million, equity based compensation of $0.8 million and deferred income amortization of $(0.8) million as well as a noncash use of $(0.7) million for an investment in an unconsolidated entity, loss on debt extinguishment of $0.3 million, a loss of $0.3 million on the debt fair value option and a $0.9 million loss due to a debt modification inducement. Other operating activities resulted in an increase in working capital of $8.4 million. Changes to accrued expenses, accounts receivable, accounts payable and other assets in 2019 comprised the $8.4 million.

There were no cash flows from investing activities in 2020.

Cash flows used by investing activities for 2019 were $0.01 million compared to $1.0 million provided by for in 2018. The same period during 2018 includes a payment of $1.0 million from Magellan Ltd (“Magellan”) for the purchase of certain marine assets.

Cash flows provided by financing activities for 2020 were $15.2 million, which represented a $12.3 million increase over the same period in 2019 of $2.9 million. The current period $15.2 million was comprised of funds received from our NAFTA litigation financing and funds received from the 37 North agreement (NOTE H). We received funds from the Small Business Administration (SBA) programs for the Payroll Protection Program (PPP) and the Emergency Injury Disaster Loan (EIDL) (NOTE H). These debt proceeds of $3.6 million were offset by $0.2 million of repayments of financed obligations. In August 2020 we sold 2.5 million of our common shares for net-proceeds of $11.3 million (see NOTE L). During December 2020, we sold $800,000 of new equity in one of our controlled subsidiaries to an existing shareholder of that subsidiary.

Cash flows provided by financing activities for 2019 were $2.9 million which represented $2.8 million of funds received from our NAFTA litigation financing, and $0.5 million debt financing offset by $0.3 million of repayments of financed obligations. For the same period in 2018, we borrowed the final tranche of $0.4 million from MINOSA, increased our note payable to SMOM by $0.5 and received $0.8 million toward our last promissory note. We also received a net advance of $1.0 million from Monaco in January 2018 which was eventually converted to a promissory note. This cash inflow was partially offset by repayment of debt obligations of $0.2 million. During the fourth quarter of 2018, we issued new equity in an equity offering netting the Company $4.6 million.

General Discussion 2020

At December 31, 2020, we had cash and cash equivalents of $6.2 million, an increase of $5.9 million from the December 31, 2019 balance of $0.2 million. The operating cash used of $9.3 million was supported by debt proceeds from 37North, the NAFTA litigation financing and the SBA's programs for the PPP and EIDL as well as the August 2020 capital raise of $11.3 million noted below. The $9.3 million of cash used from operations was partially offset by non-cash items totaling $1.0 million which include share-based compensation, loss on debt extinguishment accounting and the results of the hybrid-debt agreement fair value accounting.

Financial debt of the company, excluding any derivative, hybrid-debt fair value accounting or beneficial conversion feature components of such, was $43.2 million at December 31, 2020 and $33.9 million at December 31, 2019.

On August 21, 2020, we sold an aggregate of 2,553,314 shares of our common stock and warrants to purchase up to 1,901,985 shares of our common stock. The net proceeds received from sale, after offering expenses of $0.3 million, were $11.3 million (See NOTE L).

Since SEMARNAT initially declined to approve the environmental permit application of our Mexican subsidiary in April 2016 and again in October 2018, notwithstanding that the Superior Court of the Federal Court of Administrative Justice (TFJA) in Mexico nullified SEMARNAT's initial denial, we continue to support the efforts of our subsidiaries and partners to work through the administrative, legal and political process necessary to have the decision reviewed and overturned in the court of the TFJA. On January 4, 2019, we initiated the process to submit a claim against Mexico to arbitration under the investment protection chapter of the North American Free Trade Agreement (NAFTA). On September 4, 2020, we filed our First Memorial with the Tribunal. The First Memorial is the filing that fully lays out our case, witnesses and evidence for the Tribunal. Mexico filed its counter-memorial, which is available on the International Centre for Settlement of Investment Disputes (ICSID) website, on February 23, 2021. On June 29, 2021, we filed our reply to Mexico's counter-memorial. Odyssey's filings are available at www.odysseymarine.com/nafta. The NAFTA's Tribunal hearing took place from January 24 – January 29, 2022. After this evidentiary phase is closed by the Tribunal, deliberations will begin. Odyssey cannot predict the length of these deliberations or when a ruling will be issued, but we remain confident in the merits of our case. See Litigation Financing below regarding the funding of this litigation, see ITEM 1. BUSINESS for further detail.

Financings

Stock Purchase Agreement

On March 11, 2015, we entered into a Stock Purchase Agreement (the "Purchase Agreement") with Penelope Mining LLC (the "Investor"), and, solely with respect to certain provisions of the Purchase Agreement, Minera del Norte, S.A. de C.V. ("MINOSA"). The Purchase Agreement provides for us to issue and sell to the Investor shares of our preferred stock in the amounts and at the prices set forth below (the numbers set forth below have been adjusted to reflect the 1-for-12 reverse stock split of February 19, 2016):

Series	No. of Shares	Price per Share
Series AA-1	8,427,004	$ 12.00
Series AA-2	7,223,145	$ 6.00

The closing of the sale and issuance of shares of the Company's preferred stock to the Investor is subject to certain conditions, including the Company's receipt of required approvals from the Company's stockholders (received on June 9, 2015), the receipt of regulatory approval, performance by the Company of its obligations under the Purchase Agreement, receipt of certain third party consents, the listing of the underlying common stock on the NASDAQ Stock Market and the Investor's satisfaction, in its sole discretion, with the viability of certain undersea mining projects of the Company. Completion of the transaction requires amending the Company's articles of incorporation to (a) effect a reverse stock split, which was done on February 19, 2016, (b) adjusting the Company's authorized capitalization, which was also done on February 19, 2016, and (c) establishing a classified board of directors (collectively, the "Amendments"). The Amendments have been or will be set forth in certificates of amendment to the Company's articles of incorporation filed or to be filed with the Nevada Secretary of State.

The purchase and sale of 2,916,667 shares of Series AA-1 Preferred Stock at an initial closing and for the purchase and sale of the remaining 5,510,337 shares of Series AA-1 Preferred Stock according to the following schedule, is subject to the satisfaction or waiver of specified conditions set forth in the Purchase Agreement:

Date	No. Series AA-1 Shares	Total Purchase Price
March 1, 2016	1,806,989	$21,683,868
September 1, 2016	1,806,989	$21,683,868
March 1, 2017	1,517,871	$18,214,446
March 1, 2018	378,488	$ 4,541,856

The Investor may elect to purchase all or a portion of the Series AA-1 Preferred Stock before the other dates set forth above. The initial closing and the closing scheduled for March 1, 2016, have not yet occurred because certain conditions to closing have not yet been satisfied or waived. After completing the purchase of all AA-1 Preferred Stock, the Investor has the right, but not the obligation, to purchase all or a portion the 7,223,145 shares of Series AA-2 Preferred Stock at any time after the closing price of the Common Stock on the NASDAQ Stock Market has been $15.12 or more for 20 consecutive trading days. The Investor's right to purchase the shares of Series AA-2 Preferred Stock will terminate on the fifth anniversary of the initial closing under the Purchase Agreement.

The Purchase Agreement contains certain restrictions, subject to certain exceptions described below, on the Company's ability to initiate, solicit or knowingly encourage or facilitate an alternative acquisition proposal, to participate in any discussions or negotiations regarding an alternative acquisition proposal, or to enter into any acquisition agreement, merger agreement or similar definitive agreement, or any letter of intent, memorandum of understanding or agreement in principle, or any other agreement relating to an alternative acquisition proposal. These restrictions will continue until the earlier to occur of the termination of the Purchase Agreement pursuant to its terms and the time at which the initial closing occurs.

The Purchase Agreement also includes customary termination rights for both the Company and the Investor and provides that, in connection with the termination of the Purchase Agreement under specified circumstances, including in the event of a termination by the Company in order to accept a Superior Proposal, the Company will be required to pay to the Investor a termination fee of $4.0 million.

The Purchase Agreement contains representations, warranties and covenants of the parties customary for a transaction of this type.

Subject to the terms set forth in the Purchase Agreement, the Lender provided the Company, through a subsidiary of the Company, with loans of $14.75 million, the outstanding amount of which, plus accrued interest, will be repaid from the proceeds from the sale of the shares of Series AA-1 Preferred Stock at the initial closing. The outstanding principal balance of the loan at December 31, 2019 was $14.75 million.

The obligation to repay the loans is evidenced by a promissory note (the "Note") in the amount of up to $14.75 million and bears interest at the rate of 8.0% per annum, and, pursuant to a pledge agreement (the "Pledge Agreement") between the Lender and Odyssey Marine Enterprises Ltd., an indirect, wholly owned subsidiary of the Company ("OME"), is secured by a pledge of 54.0 million shares of Oceanica Resources S. de R.L., a Panamanian limitada ("Oceanica"), held by OME. In addition, OME and the Lender entered into a call option agreement (the "Oceanica Call"), pursuant to which OME granted the Lender an option to purchase the 54.0 million shares of Oceanica held by OME for an exercise price of $40.0 million at any time during the one-year period after the Oceanica Call was executed and delivered by the parties. The Oceanica Call option expired on March 11, 2016 without being executed or extended. On December 15, 2015, the Promissory Note was amended to provide that, unless otherwise converted as provided in the Note, the adjusted principal balance shall be due and payable in full upon written demand by MINOSA; provided that MINOSA agrees that it shall not demand payment of the adjusted principal balance earlier than the first to occur of: (i) 30 days after the date on which (x) SEMARNAT makes a determination with respect to the current application for the Manifestacion de Impacto Ambiental relating to our phosphate deposit project, which determination is other than an approval or (y) Enterprises or any of its affiliates withdraws such application without MINOSA's prior written consent; (ii) termination by Odyssey of the Stock Purchase Agreement, dated March 11, 2015 (the "Purchase Agreement"), among Odyssey, MINOSA, and Penelope Mining, LLC (the "Investor"); (iii) the occurrence of an event of default under the Promissory Note; (iv) March 30, 2016; or (v) if and only if the Investor shall have terminated the Purchase Agreement pursuant to Section 8.1(d)(iii) thereof, March 30, 2016. On March 18, 2016 the agreements with MINOSA and Penelope were further

amended and extended the maturity date of the loan to March 18, 2017(see NOTE H). The August 10, 2017 Minosa Purchase Agreement amended the due date of this note to a due date which may be no earlier than December 31, 2017, and that is at least 60 days subsequent to written notice that Minosa intends to demand payment. We have not received any notice the creditor intends to demand payment. See the August 10, 2017 Minosa Purchase Agreement disclosure below. During December 2017 MINOSA transferred this debt to its parent company.

On March 18, 2016, Odyssey entered into a $3.0 million Note Purchase Agreement with Epsilon Acquisitions LLC (see below and NOTE H).

Epsilon is an investment vehicle of Mr. Alonso Ancira who is Chairman of the Board of AHMSA, an entity that controls MINOSA.

Class AA Convertible Preferred Stock

Pursuant to a certificate of designation (the "Designation") to be filed with the Nevada Secretary of State, each share of Series AA-1 Convertible Preferred Stock and Series AA-2 Convertible Preferred Stock (collectively, the "Class AA Preferred Stock") will be convertible into one share of Common Stock at any time and from time to time at the election of the holder. Each share of Class AA Preferred Stock will rank pari passu with all other shares of Class AA Preferred Stock and senior to shares of Common Stock and all other classes and series of junior stock. If the Company declares a dividend or makes a distribution to the holders of Common Stock, the holders of the Class AA Preferred Stock will be entitled to participate in the dividend or distribution on an as-converted basis. Each share of Class AA Preferred Stock shall entitle the holder thereof to vote, in person or by proxy, at any special or annual meeting of stockholders, on all matters voted on by holders of Common Stock, voting together as a single class with other shares entitled to vote thereon. So long as a majority of the shares of the Class AA Preferred Stock are outstanding, the Company will be prohibited from taking specified extraordinary actions without the approval of the holders of a majority of the outstanding shares of Class AA Preferred Stock. In the event of the liquidation of the Company, each holder of shares of Class AA Preferred Stock then outstanding shall be entitled to be paid, out of the assets of the Corporation available for distribution to its stockholders, an amount in cash equal to the greater of (a) the amount paid to the Company for such holder's shares of Class AA Preferred Stock, plus an accretion thereon of 8.0% per annum, compounded annually, and (b) the amount such holder would be entitled to receive had such holder converted such shares of Class AA Preferred into Common Stock immediately prior to such time at which payment will be made or any assets distributed.

Stockholder Agreement

The Purchase Agreement provides that, at the initial closing, the Company and the Investor will enter into a stockholder agreement (the "Stockholder Agreement"). The Stockholder Agreement will provide that (a) in connection with each meeting of the Company's stockholders at which directors are to be elected, the Company will (i) nominate for election as members of the Company's board of directors a number of individuals designated by the Investor ("Investor Designees") equivalent to the Investor's proportionate ownership of the Company's voting securities (rounded up to the next highest integer) less the number of Investor Designees who are members of the board of directors and not subject to election at such meeting, and (ii) use its reasonable best efforts to cause such nominees to be elected to the board of directors; (b) the Company will cause one of the Investor Designees to serve as a member of (or at such Investor Designee's election, as an observer to) each committee of the Company's board of directors; and (c) each Investor Designee shall have the right to enter into an indemnification agreement with the Company (an "Indemnification Agreement") pursuant to which such Investor Designee is indemnified by the Company to the fullest extent allowed by Nevada law if, by reason of his or her serving as a director of the Company, such Investor Designee is a party or is threatened to be made a party to any proceeding or by reason of anything done or not done by such Investor Designee in his or her capacity as a director of the Company.

The Stockholder Agreement will provide the Investor with pre-emptive rights with respect to certain equity offerings of the Company and restricts the Company from selling equity securities until the Investor has purchased all the Class AA Preferred Stock or no longer has the right or obligation to purchase any of the Class AA Preferred Stock. The Stockholder Agreement will also provide the Investor with certain "first look" rights with respect to certain mineral deposits discovered by the Company or its subsidiaries. Pursuant to the Stockholder Agreement, the Company will grant the Investor certain demand and piggy-back registration rights, including for shelf registrations, with respect to the resale of the shares of Common Stock issuable upon conversion of the Class AA Preferred Stock.

Other loans and financing

Litigation Financing

On June 14, 2019, Odyssey and Exploraciones Oceánicas S. de R.L. de C.V., our Mexican subsidiary ("ExO" and, together with Odyssey, the "Claimholder"), and Poplar Falls LLC (the "Funder") entered into an International Claims Enforcement Agreement (the "Agreement"), pursuant to which the Funder agreed to provide financial assistance to the Claimholder to facilitate the prosecution and recovery of the claim by the Claimholder against the United Mexican States under Chapter Eleven of the North American Free Trade Agreement ("NAFTA") for violations of the Claimholder's rights under NAFTA related to the development of an undersea phosphate deposit off the coast of Baja Sur, Mexico (the "Project"), on our own behalf and on behalf of ExO and United Mexican States (the "Subject Claim"). Pursuant to the Agreement, the Funder agreed to specified fees and expenses regarding the Subject Claim (the "Claims Payments") incrementally and at the Funder's sole discretion.

Under the terms of the Agreement, the Funder agreed to make Claims Payments in an aggregate amount not to exceed $6,500,000 (the "Maximum Investment Amount"). The Maximum Investment Amount will be made available to the Claimholder in two phases, as set forth below:

(a) a first phase, in which the Funder shall make Claims Payments in an aggregate amount no greater than $1,500,000 for the payment of antecedent and ongoing costs ("Phase I Investment Amount"); and

(b) a second phase, in which the Funder shall make Claims Payments in an aggregate amount no greater than $5,000,000 for the purposes of pursuing the Subject Claim to a final award ("Phase II Investment Amount").

Upon exhaustion of the Phase I Investment Amount, the Claimholder will have the option to request Tranche A of the Phase II Investment Amount, consisting of funding up to $3.5 million ("Tranche A Committed Amount"). Upon exhaustion of the Tranche A Committed Amount, the Claimholder will have the option to request Tranche B of the Phase II Investment Amount, consisting of funding of up to $1.5 million ("Tranche B Committed Amount"). The Claimholder must exercise its option to receive the Tranche A Committed Amount in writing, no less than thirty days before submitting a Funding Request to the Funder under Tranche A. The Claimholder must exercise its option to receive the Tranche B Committed Amount in writing within forty-five days after the exhaustion of the Tranche A Committed Amount. Pursuant to the Agreement, the Claimholder agreed that, upon exercising the Claimholder's option to receive funds under Phase I, Tranche A of Phase II, or Tranche B of Phase II, the Funder will be the sole source of third-party funding for the specified fees and expenses of the Subject Claim under each respective phase and tranche covered by the option exercised, and the Claimholder will obtain funding for such fees and expenses only as set forth in the Agreement. The Funder was due closing fee of $80,000 for the Phase I Investment Amount, and $80,000 for the Phase II Investment Amount to pay third parties in connection with due diligence and other administrative and transaction costs incurred by the Funder prior to and in furtherance of execution of the Agreement.

Upon the Funder making Claims Payments to the Claimholder or its designees in an aggregate amount equal to the Maximum Investment Amount, the Funder has the option to continue funding the specified fees and expenses in relation to the Subject Claim on the same terms and conditions provided in the Agreement. The Funder must exercise its option to continue funding in writing, within thirty days after the Funder has made Claims Payments in an aggregate amount equal to the Maximum Investment Amount. If the Funder exercises its option to continue funding, the parties agreed to attempt in good faith to amend the Agreement to provide the Funder with the right to provide at the Funder's discretion funding in excess of the Maximum Investment Amount, in an amount up to the greatest amount that may then be reasonably expected to be committed for investment in Subject Claim. If the Funder declines to exercise its option, the Claimholder may negotiate and enter into agreements with one or more third parties to provide funding, which shall be subordinate to the Funder's rights under the Agreement.

The Agreement provides that the Claimholder may at any time without the consent of the Funder either settle or refuse to settle the Subject Claim for any amount; provided, however, that if the Claimholder settles the Subject Claim without the Funder's consent, which consent shall not be unreasonably withheld, conditioned, or delayed, the value of the Recovery Percentage (as defined below) will be deemed to be the greater of (a) the Recovery Percentage (under Phase I or Phase II, as applicable), or (b) the total amount of all Claims Payments made in connection with such Subject Claim multiplied by three (3).

If the Claimholder ceases the Subject Claim for any reason other than (a) a full and final arbitral award against the Claimholder or (b) a full and final monetary settlement of the claims, including in particular, for a grant of an environmental permit to the Claimholder allowing it to proceed with the Project (with or without a monetary component), all Claims Payments under Phase I and, if Claimholder has exercised the corresponding option, the Tranche A Committed Amount and Tranche B

Committed Amount, shall immediately convert to a senior secured liability of the Claimholder. This sum shall incur an annualized internal rate of return (IRR) of 50.0% retroactive to the date each Funding Request was paid by the Funder (under Phase I), or, to the conversion date for the Tranche A Committed Amount and Tranche B Committed Amount of Phase II if the Claimholder has exercised the respective option (collectively, the "Conversion Amount"). Such Conversion Amount and any and all accrued IRR shall be payable in-full by the Claimholder within 24 months of the date of such conversion, after which time any outstanding Conversion Amounts, shall accrue an (IRR) of 100.0%, retroactive to the conversion date (the "Penalty Interest Amount"). The Claimholder will execute such documents and take other actions as necessary to grant the Funder a senior security interest on and over all sums due and owing by the Claimholder in order to secure its obligation to pay the Conversion Amount to the Funder. If the Claimholder ceases the Subject Claim due to the grant of an environmental permit (with or without a monetary component), all Claims Payments under Phase 1 and, if the Claimholder has exercised the corresponding option, the Tranche A Committed Amount and Tranche B Committed Amount shall immediately convert to a senior secured liability of the Claimholder and shall incur an annualized an IRR of 50.0% on the Conversion Amount, noted above, from the conversion date. Management has estimated it is more likely than not the Subject Claim will result in the issuance of the environmental permit requiring us to record interest under Generally Accepted Accounting Principles. Reliance should not be placed on this estimate in determining the likely outcome of the Subject Claim.

If, at any time after exercising its option to receive funds under either Tranche A or Tranche B of Phase II, the Claimholder wishes to fund the Subject Claim with its own capital ("Self-Funding") (which excludes any Claims Payments made, either directly or indirectly, by any other third party), the Claimholder shall immediately pay to the Funder the Conversion Amount, provided that this requirement shall not apply if, after the Funder has made Claims Payments in an aggregate amount equal to the Maximum Investment Amount, the Funder does not exercise its option to provide Follow-On Funding.

In the event of any receipt of proceeds resulting from the Subject Claim ("Proceeds"), the Funder shall be entitled to any additional sums above the Conversion Amount to which the Funder is entitled as described below. Should the Claimholder cease the Subject Claim as described above after Self-Funding the Claim, accrued IRR and Penalty Interest shall be calculated and paid to the Funder as set forth above. The Funder's rights to the Recovery Percentage as defined below shall survive any decision by Claimholder to utilize Self-Funding. The parties acknowledge this Agreement constitutes a sale of the right to a portion of the Proceeds (if any) arising from the Subject Claim as set forth in this Agreement. The Claimholder has relinquished its right to the portion of the proceeds, if any, that the Funder would have the right to as described below. This sale of proceeds is being accounted for under the guidance of ASC 470-10-25 *Recognition (Sales of Future Revenues)*

On each Distribution Date, distributions of the Proceeds shall be made to the Claimholder and the Funder in accordance with subparagraph (a) or (b) below (the "Recovery Percentage"), as applicable:

(a) If the Claimholder receives only the Phase I Investment Amount from the Funder, the first Proceeds shall be distributed as follows:

(i) first, 100.0% to the Funder, until the cumulative amount distributed to the Funder equals the total Claims Payments paid by the Funder under Phase I;

(ii) second, 100.0% to the Funder until the cumulative amount distributed to the Funder equals an IRR of 20% of Claims Payments paid by the Funder under Phase I ("Phase I Compensation"), per annum; and

(iii) thereafter, 100.0% to the Claimholder.

(b) If the Claimholder exercises its options to receive Tranche A or both Tranche A and Tranche B of the Phase II Investment Amount, the first Proceeds shall be distributed as follows:

(i) first, 100.0% to the Funder until the cumulative amount distributed to the Funder equals the total Claims Payments paid by the Funder under Phases I and II;

(ii) second, 100.0% to the Funder until the cumulative amount distributed to the Funder equals an additional 300.0% of Phase I Investment Amount; plus an additional 300% of the Tranche A Committed Amount (i.e. 300.0% of $3.5 million), less any amounts remaining of the Tranche A Committed Amount that the Funder did not pay as Claims Payments; plus an additional 300.0% of the Tranche B Committed Amount (i.e. 300.0% of $1.5 million), if the Claimholder exercises the Tranche B funding option, less any amounts remaining of the Tranche B Committed Amount that the Funder did not pay as Claims Payments;

(iii) third, for each $10,000 in specified fees and expenses paid by the Funder under Phase I and Phase II and any amounts over each $10,000 of the Tranche A Committed Amount and the Tranche B Committed Amount (if the Claimholder exercises the Tranche B funding option), 0.01% of the total Proceeds from any recoveries after repayment of (i) and (ii) above, to the Funder; and

(iv) thereafter, 100% to the Claimholder.

The Agreement provides that if no Proceeds are ever paid to or received by the Claimholder or its representatives and if the environmental permit is not issued, the Funder shall have no right of recourse or right of action against the Claimholder or its representatives, or any of their respective property, assets, or undertakings, except as otherwise specifically contemplated by the Agreement. If (a) Proceeds are paid to or received by the Claimholder or its representatives; (b) such Proceeds are promptly applied and/or distributed by the Claimholder or on behalf of the Claimholder in accordance with the terms of the Agreement; and (c) the amount received by the Funder as a result thereof is not sufficient to pay all of the Recovery Percentage and all of the amounts due to the Funder under the Agreement, then (provided that all of the Proceeds which the Funder will ever be entitled to have been paid to or received by the Funder), the Funder shall have no right of recourse or action against the Claimholder or its Representatives, or any of their property, assets, or undertakings, except as otherwise specifically contemplated by the Agreement. Pursuant to the Agreement, the Claimholder acknowledged the Funder's priority right, title, and interest in any Proceeds, including against any available collateral to secure its obligations under the Agreement, which security interest shall be first in priority as against all other security interests in the Proceeds. The Claimholder also acknowledged and agreed to execute and authorize the filing of a financing statement or similar and to take such other actions in such jurisdictions as the Funder, in its sole discretion, deems necessary and appropriate to perfect such security interest. The Agreement also includes representations and warranties, covenants, conditions, termination and indemnification provisions, and other provisions customary for comparable arrangements.

Amendment and Restatement (January 31, 2020)

On January 31, 2020, the Claimholder and the Funder entered into an Amended and Restated International Claims Enforcement Agreement (the "Restated Agreement"). The material terms and provisions that were amended or otherwise modified are as follows:

- The Funder agreed to provide up to $2.2 million in Arbitration Support Funds for the purpose of paying the Claimholder's litigation support costs in connection with Subject Claim;
- A closing fee of $200,000 has been retain by the Funder in connection with due diligence and other transaction costs incurred by the Funder;
- A warrant was issued to purchase our common stock which is exercisable for a period of five years beginning on the earlier of (a) the date on which the Claimholder ceases the Subject Claim for any reason other than a full and final arbitral award against the Claimholder or a full and final monetary settlement of the claims or (b) the date on which Proceeds are received and deposited into escrow. The exercise price per share is $3.99, and the Funder can exercise the warrant to purchase the number of shares of our common stock equal to the dollar amount of Arbitration Support Funds provided to us pursuant to the Restated Agreement divided by the exercise price per share (subject to customary adjustments and limitations); and
- All other terms in the Restated Agreement are substantially the same as in the original Agreement.

During 2020, the Funder provided us with $2.0 million of the Arbitration Support Funds, and we incurred $200,000 in related fees that were treated as an additional advance. Upon each funding, the proceeds were allocated between debt and equity for the warrants based on the relative fair value of the two instruments. As a result, there was a debt discount of $1,063,811 which is being amortized over the expected remaining term of the agreement using the effective interest method which is charged to interest expense.

Although the warrants only become exercisable upon the occurrence of future events, they are considered issued for accounting purposes and were valued using a binomial lattice model. The expected volatility assumption was based on the historical volatility of our common stock. The expected life assumption was primarily based on management's expectations of when the Warrants will become exercisable and the risk-free interest rate for the expected term of the warrant is based on the U.S. Treasury yield curve in effect at the time of measurement.

Second Amendment and Restatement (December 12, 2020)

On December 12, 2020, the Claimholder and the Funder entered into a Second Amended and Restated International Claims Enforcement Agreement (the "Second Restated Agreement") relating to the Subject Claim. Under the terms of the Second Restated Agreement, the Funder agreed to make Claims Payments in an aggregate amount not to exceed $20,000,000 (the "Maximum Investment Amount"). The Second Restated Agreement requires the Funder to make Claims Payments in an aggregate amount no greater than $10,000,000 for the purposes of pursuing the Subject Claim to a final award ("Phase III Investment Amount"). We also incurred $200,000 in related fees, which were treated as an additional advance. The Second Restated Agreement includes the same representations and warranties, covenants, conditions, termination and indemnification provisions, and other provisions as in the original agreement.

Third Amendment and Restatement (June 14, 2021)

On June 14, 2021, the Claimholder and the Funder entered into a Third Amended and Restated International Claims Enforcement Agreement (the "Third Restated Agreement") relating to the Subject Claim. Under the terms of the Third Restated Agreement, the Funder has made and agreed to make Claims Payments in an aggregate amount not to exceed $25,000,000, an increase of $5.0 million (the "Incremental Amount"). The Third Restated Agreement requires the Claimholder to request $2.5 million of the Incremental Amount (the "First $2.5 Million"). Within 15 days after exhaustion of the First $2.5 Million, the Claimholder may either (a) request the remaining $2.5 million (the "Second $2.5 Million") of the Incremental Amount or (b) notify the Funder that the Claimholder has decided to self-fund the Second $2.5 Million. We also incurred $80,000 in related fees which were treated as an additional advance. This Second Restated Agreement includes the same representations and warranties, covenants, conditions, termination and indemnification provisions, and other provisions as in the original agreement.

The December 31, 2021 carrying value of the obligation is $18,323,097 and is net of unamortized debt fees of $293,793 as well as the net unamortized debt discount of $649,928 associated with the fair value of the warrants. For the year ended December 31, 2021, the expense related to debt discount and fee amortization was $241,034 and $133,993, respectively. The total face value of this obligation at December 31, 2021 and 2020 was $19,266,818 and $12,207,477, respectively.

Going Concern Consideration

We have experienced several years of net losses and may continue to do so. Our ability to generate net income or positive cash flows for the following twelve months is dependent upon financings, our success in developing and monetizing our interests in mineral exploration entities, generating income from exploration charters, collecting on amounts owed to us, or completing the MINOSA/Penelope equity financing transaction approved by our stockholders on June 9, 2015.

Our 2022 business plan requires us to generate new cash inflows to effectively allow us to perform our planned projects. We continually plan to generate new cash inflows through the monetization of our receivables and equity stakes in seabed mineral companies, financings, syndications or other partnership opportunities. If cash inflow ever becomes insufficient to meet our desired projected business plan requirements, we would be required to follow a contingency business plan that is based on curtailed expenses and fewer cash requirements. On August 21, 2020, we sold an aggregate of 2,553,314 shares of our common stock and warrants to purchase up to 1,901,985 shares of our common stock. The net proceeds received from this sale, after offering expenses of $0.3 million, were $11.2 million (See NOTE L). These proceeds, coupled with other anticipated cash inflows, provided operating funds through early 2022.

On March 11, 2015, we entered into a Stock Purchase Agreement with Minera del Norte S.A. de c.v. ("MINOSA") and Penelope Mining LLC ("Penelope"), an affiliate of MINOSA, pursuant to which (a) MINOSA agreed to extend short-term, debt financing to Odyssey of up to $14.75 million, and (b) Penelope agreed to invest up to $101 million over three years in convertible preferred stock of Odyssey. The equity financing is subject to the satisfaction of certain conditions, including the approval of our stockholders which occurred on June 9, 2015, and MINOSA and Penelope are currently under no obligation to make the preferred share equity investments.

Our consolidated non-restricted cash balance at December 31, 2021 was $2.3 million. We have a working capital deficit at December 31, 2021 of $49.3 million. In the fourth quarter of 2021, we executed a Termination and Settlement Agreement with Monaco and SMOM that removed approximately $14.5 million of indebtedness from our balance sheet (see NOTE H). Our largest loan of $14.75 million from MINOSA had a due date of December 31, 2017 which is now linked to other stipulations, see NOTE H for further detail. The majority of our remaining assets have been pledged to MINOSA, leaving us with few opportunities to raise additional funds from our balance sheet. The total consolidated book value of our assets was

approximately $8.9 million at December 31, 2021, which includes cash of $2.3 million. The fair market value of these assets may differ from their net carrying book value. Even though we executed the above noted financing arrangement with Penelope, Penelope must purchase the shares for us to be able to complete the equity component of the transaction. The Penelope equity transaction is heavily dependent on the outcome of our subsidiary's application approval process for an environmental permit (EIA), as well as the current NAFTA litigation, to commercially develop a mineralized phosphate deposit off the coast of Mexico. The factors noted above raise doubt about our ability to continue as a going concern. Our consolidated financial statements do not include any adjustments to the amounts and classification of assets and liabilities that may be necessary should we be unable to continue as a going concern.

Off Balance Sheet Arrangements

We do not engage in off-balance sheet financing arrangements. In particular, we do not have any interest in so-called limited purpose entities, which include special purpose entities (SPEs) and structured finance entities.

Indemnification Provisions

Under our bylaws and certain consulting agreements, we have agreed to indemnify our officers and directors for certain events arising as a result of the officer's or director's serving in such capacity. Separate agreements may provide indemnification after term of service. The term of the indemnification agreement is as long as the officer or director remains in the employment of the company. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited. However, our director and officer liability insurance policy limits its exposure and enables us to recover a portion of any future amounts paid. As a result of our insurance policy coverage, we believe the estimated fair value of these indemnification agreements is minimal and no liabilities are recorded for these agreements as of December 31, 2021.

Critical Accounting Estimates

The discussion and analysis of our financial position and results of operations is based upon our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect our financial position and results of operations. See NOTE A to the Consolidated Financial Statements for a description of our significant accounting policies. Critical accounting estimates are defined as those that are reflective of significant judgment and uncertainties, and potentially result in materially different results under different assumptions and conditions. We have identified the following critical accounting estimates. We have discussed the development, selection and disclosure of these policies with our audit committee.

Long-Lived Assets

As of December 31, 2021, we had approximately $0.5 million of net property and equipment, right to use – operating lease and related assets. Our policy is to recognize impairment losses relating to long-lived assets in accordance with the ASC topic for Property, Plant and Equipment. Impairment decisions are based on several factors, including, but not limited to, management's plans for future operations, recent operating results and projected cash flows.

Realizability of Deferred Tax Assets

We have recorded a net deferred tax asset of $0 at December 31, 2021. As required by the ASC topic for Accounting for Income Taxes, we have evaluated whether it is more likely than not that the deferred tax assets will be realized. Based on the available evidence, we have concluded that it is more likely than not that those assets would not be realizable without the recovery and rights of ownership or salvage rights of high value shipwrecks or the monetization of our mineral exploration stakes and thus a valuation allowance of $74.1 million has been recorded as of December 31, 2021.

Allowance for Doubtful Accounts

In determining the collectability of our accounts receivable, we need to make certain assumptions and estimates. Specifically, we may examine accounts and assess the likelihood of collection of particular accounts. Management has elected to record bad debts using the direct write-off method. Generally accepted accounting principles state an estimate is to be made for an allowance for doubtful accounts. The effect of using the direct write-off method, however, is not materially different from the results that would have been obtained had the allowance method been followed. If we were to have a recorded allowance, the accounts receivable would be stated net the recorded allowance.

Derivative Financial Instruments

From time to time, we may enter into a financial instrument that may contain a derivative. In evaluating fair value of derivative financial instruments, there are numerous assumptions which management must make that may influence the valuation of the derivatives that would be included in the financial statements.

Exploration License

The Company follows the guidance pursuant to ASU 350, "*Intangibles-Goodwill and Other*" in accounting for its exploration license. Management determined the rights to use the license to have an indefinite life. This assessment is based on the historical success of renewing the license since 2006, and the fact that management believes there are no legal, regulatory, or contractual provisions that would limit the useful life of the asset. The exploration license is not dependent on another asset or group of assets that could potentially limit the useful life of the exploration license. In the future, the recoverability of the license will be tested whenever circumstances indicate that its carrying amount may not be recoverable per the guidance of ASU 360, "*Subsequent Measurement."*

Contractual Obligations

At December 31, 2021, except as disclosed in NOTE O regarding our office lease, the Company did not have any other contractual obligations that extended beyond 12 months.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk is the exposure to loss resulting from changes in interest rates, foreign currency exchange rates, commodity prices and equity prices. We do not believe we have material market risk exposure and have not entered into any market risk sensitive instruments to mitigate these risks or for trading or speculative purposes.

We currently do not have any debt obligations or instruments that expose us to interest rate risk.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this item appears beginning on page 30.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

We maintain disclosure controls and procedures designed to ensure that information we are required to disclose in reports that we file with or furnish to the SEC is recorded, processed, summarized and reported within the time periods specified by the SEC. An evaluation was carried out under the supervision and with the participation of the Company's management, including the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, the CEO and CFO have concluded that the Company's disclosure controls and procedures are effective to ensure that we are able to collect process and disclose the information we are required to disclose in the reports we file with the SEC within required time periods.

Internal Controls over Financial Reporting

Management's report on our internal controls over financial reporting can be found in the financial statement section of this report. There have been no significant changes in the Company's internal controls over financial reporting as of December 31, 2021 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information concerning Directors and Executive Officers is hereby incorporated by reference to the information under the headings "Election of Directors" and "Executive Officers and Directors of the Company" in the Company's Proxy Statement (the "Proxy Statement") for the Annual Meeting of Stockholders to be held on June 13, 2022.

The Company has adopted a Code of Ethics that applies to all of its employees, including the principal executive officer, the principal financial officer and the principal accounting officer. The Code of Ethics and all committee charters are posted on the Company's website (www.odysseymarine.com). We will provide a copy of any of these documents to stockholders free of charge upon request to the Company.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is hereby incorporated by reference to the information under the heading "Executive Compensation and Related Information" in the Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

A portion of the information required by this Item pursuant to Item 403 of Regulation S-K is hereby incorporated by reference to the information under the heading "Security Ownership of Certain Beneficial Owners and Management" in the Proxy Statement. The information required pursuant to Item 201(d) of Regulation S-K is hereby incorporated by reference to the information under the heading "Security Ownership of Certain Beneficial Owners and Management" in the Proxy Statement.

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

The information required by this Item is hereby incorporated by reference to the information under the heading "Certain Relationships and Related Transactions" in the Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item is hereby incorporated by reference to the information under the heading "Independent Public Accounting Firm's Fees" in the Proxy Statement.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this Annual Report on Form 10-K:

1. (a) Consolidated Financial Statements

   See "Index to Consolidated Financial Statements" on page 37.

   (b) Consolidated Financial Statement Schedules

   See "Index to Consolidated Financial Statements" on page 37.

   All other schedules have been omitted because the required information is not significant or is included in the financial statements or notes thereto, or is not applicable.

2. Exhibits

   The Exhibits listed in the Exhibits Index, which appears immediately following the signature page and is incorporated herein by reference, are filed as part of this Annual Report on Form 10-K.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS
ODYSSEY MARINE EXPLORATION, INC.

MANAGEMENT'S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control over financial reporting is 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. This process includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of the internal control over financial reporting to future periods are subject to risk that the internal control may become inadequate because of changes in conditions, or that the degree of compliance with policies or procedures may deteriorate.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Stockholders of Odyssey Marine Exploration, Inc and Subsidiaries

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Odyssey Marine Exploration, Inc and Subsidiaries (the Company) as of December 31, 2021, and 2020, and the related consolidated statements of income, changes stockholders' equity, and cash flows for each of the years in the three-year periods ended December 31, 2021, 2020 and 2019 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, 2021 and 2020, and the results of its operations and its cash flows for each of the years in the three-year periods ended December 31, 2021, 2020 and 2019, in conformity with accounting principles generally accepted in the United States of America.

Consideration of 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 O to the consolidated financial statements, the Company has incurred significant losses and they may be unsuccessful in raising the necessary capital to fund operations and capital expenditures. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's evaluation of the events and conditions and management's plans regarding those matters are also described in Note O. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. Our opinion is not modified with respect to that matter.

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 audits 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 included 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 Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our 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 matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Evaluation of Exploration License

As discussed in Notes A, and F to the consolidated financial statements, the Company recorded an indefinite life intangible exploration license for approximately $1.8 million on the consolidated balance sheets at December 31, 2021 and 2020. The Company has determined that the exploration license has an indefinite useful life. This determination is reviewed annually by

management, as well as an annual review for impairment. We identified the assessment of the useful life and potential impairment of the exploration license as a critical audit matter due to the assessment involving judgment in determining whether the rights to the license have an indefinite life, and judgment in determining if any triggering events have occurred that would cause the exploration license to be impaired.

The primary procedures we performed to address this critical audit matter included:

- Gaining an understanding of the nature of the renewal process, and any additional economic factors in renewing the license. The economic factors considered included whether there were any legal, regulatory, or contractual provisions that would limit the useful life of the license.
- We made inquiries with certain management of the Company to gain this understanding and reviewed the Company's ability to renew the license.
- We determined that the most recent license renewal had been filed and approved.
- Performed procedures to determine if any events occurred that could impede the Company's ability to renew the license and trigger an impairment consideration.

Evaluation of litigation financing with detachable warrants

As discussed in Note H to the consolidated financial statements, the Company has certain litigation financing with detachable warrants that is included in "loans payable" on the consolidated balance sheets at December 31, 2021 and 2020, respectively. We identified the litigation financing as a critical audit matter. The terms of the financing agreement were complicated and involved numerous amendments, significant non-cash financing, issuance of warrants, and debt issuance costs. The terms of the financing agreement required significant audit effort in order to fully understand the terms of all the agreements as disclosed in Note H.

The primary procedures we performed to address this critical audit matter included the following:

- We reviewed all the amended agreements.
- We confirmed the face amount and the terms of the debt based on the various phases as disclosed in Note H to the consolidated financial statements.
- We recalculated the fair value of the warrants issued in 2020.

Termination and Settlement Agreement

As discussed in Note H to the consolidated financial statements, the Company entered into a Termination and Settlement Agreement (the "Agreement") with a lender, whereby the Company issued common stock and paid cash to the lender, and the lender agreed to forgive all outstanding notes payable and related accrued interest for this consideration. The Company paid $500,000 in cash and agreed to pay an additional $2.5 million. The agreement gave the lender the option to receive additional shares of common stock in-lieu of the $2.5 million cash payment. The Company recorded in the consolidated statements of income, under the caption "Gain (loss) on debt settlement, net", a gain of approximately $5.2 million. We identified the accounting of the conversion option and the gain on debt settlement as described in Note H to the consolidated financial statements, as a critical audit matter. The interpretation of the accounting as it relates to the conversion option is complex.

The primary procedures we performed to address this critical audit matter included the following:

- We obtained and reviewed the terms of the Agreement and agreed the terms to the calculation of the gain on the debt settlement.
- We confirmed the principal amount of the debt forgiven, and recalculated the accrued interest forgiven.
- We reviewed the accounting of the conversion option based on the terms in the agreement and determined the conversion option should be classified as equity as a beneficial conversion feature.

We have served as the Company's auditor since 2020

/s/ Warren Averett, LLC
PCAOB ID#: 2226
Tampa, Florida
March 31, 2022

ODYSSEY MARINE EXPLORATION, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31, 2021	December 31, 2020
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 2,274,751	$ 6,163,205
Accounts receivable and other, net	268,867	160,257
Other current assets	776,630	587,394
Total current assets	3,320,248	6,910,856
PROPERTY AND EQUIPMENT		
Equipment and office fixtures	5,602,915	7,295,717
Right to use – operating lease, net	461,109	607,039
Accumulated depreciation	(5,584,881)	(7,287,999)
Total property and equipment	479,143	614,757
NON-CURRENT ASSETS		
Investment in unconsolidated entity	3,253,950	2,370,794
Exploration license	1,821,251	1,821,251
Other non-current assets	34,295	41,806
Total non-current assets	5,109,496	4,233,851
Total assets	$ 8,908,887	$ 11,759,464
LIABILITIES AND STOCKHOLDERS' EQUITY/(DEFICIT)		
CURRENT LIABILITIES		
Accounts payable	$ 1,817,445	$ 1,463,669
Accrued expenses	27,844,107	21,174,005
Operating lease obligation	163,171	142,080
Loans payable	22,784,010	31,104,239
Total current liabilities	52,608,733	53,883,993
LONG-TERM LIABILITIES		
Loans payable	18,472,997	11,489,029
Operating lease obligation	315,795	478,966
Deferred income and revenue participation rights	—	3,818,750
Total long-term liabilities	18,788,792	15,786,745
Total liabilities	71,397,525	69,670,738
Commitments and contingencies (NOTE O)		
STOCKHOLDERS' EQUITY/(DEFICIT)		
Preferred stock - $.0001 par value; 24,984,166 shares authorized; none outstanding	—	—
Common stock – $.0001 par value; 75,000,000 shares authorized; 14,309,315 and 12,591,084 issued and outstanding	1,431	1,259
Additional paid-in capital	249,055,600	237,505,357
Accumulated (deficit)	(275,090,857)	(265,134,463)
Total stockholders' equity/(deficit) before non-controlling interest	(26,033,826)	(27,627,847)
Non-controlling interest	(36,454,812)	(30,283,427)
Total stockholders' equity/(deficit)	(62,488,638)	(57,911,274)
Total liabilities and stockholders' equity/(deficit)	$ 8,908,887	$ 11,759,464

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

ODYSSEY MARINE EXPLORATION, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME

	12 Month Period Ended December 31, 2021	12 Month Period Ended December 31, 2020	12 Month Period Ended December 31, 2019
REVENUE			
Marine services	883,790	1,087,669	1,984,316
Other services	$ 37,448	$ 950,663	$ 1,088,671
Total revenue	921,238	2,038,332	3,072,987
OPERATING EXPENSES			
Operations and research	9,550,619	10,923,819	7,927,831
Marketing, general and administrative	6,321,798	3,749,912	5,491,849
Total operating expenses	15,872,417	14,673,731	13,419,680
LOSS FROM OPERATIONS	(14,951,179)	(12,635,399)	(10,346,693)
OTHER INCOME OR (EXPENSE)			
Interest income	4,036	5,121	151
Interest expense	(10,829,464)	(6,915,535)	(5,360,192)
Gain (loss) on debt extinguishment	374,835	(777,484)	(290,024)
Gain on debt settlement, net	5,212,902	—	—
Change in derivative liabilities fair value	—	(732,958)	(322,485)
Other	4,061,090	(36,214)	819,517
Total other income or (expense)	(1,176,601)	(8,457,070)	(5,153,033)
LOSS BEFORE INCOME TAXES	(16,127,780)	(21,092,469)	(15,499,726)
Income tax benefit (provision)	—	—	—
NET (LOSS) BEFORE NON-CONTROLLING INTEREST	(16,127,780)	(21,092,469)	(15,499,726)
Non-controlling interest	6,171,385	6,280,313	5,059,765
NET (LOSS)	$ (9,956,395)	$(14,812,156)	$(10,439,961)
LOSS PER SHARE			
Basic and diluted	$ (0.75)	$ (1.41)	$ (1.12)
Weighted average number of common shares outstanding			
Basic and diluted	13,296,687	10,538,114	9,346,213

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

ODYSSEY MARINE EXPLORATION, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY / (DEFICIT)

	12 Month Period Ended December 31, 2021	12 Month Period Ended December 31, 2020	12 Month Period Ended December 31, 2019
Preferred Stock – Shares			
At beginning of year	—	—	—
Preferred stock converted to common	—	—	—
At end of year	—	—	—
Common Stock – Shares			
At beginning of year	12,591,084	9,478,009	9,222,199
Common stock issued for cash	—	2,553,315	—
Common stock issued for conversion and settlement of convertible debt and accounts payable	695,412	380,223	—
Common stock issued to settle outstanding indebtedness	984,848	—	—
Common stock issued for asset acquisition	—	—	249,584
Common stock issued for exercise of warrant	—	56,228	—
Common stock issued for services	37,971	123,309	6,226
At end of year	14,309,315	12,591,084	9,478,009
Preferred Stock			
At beginning of year	$ —	$ —	$ —
Preferred stock converted to common	—	—	—
At end of year	$ —	$ —	$ —
Common Stock			
At beginning of year	$ 1,259	$ 948	$ 922
Common stock issued for cash	—	255	—
Common stock issued for conversion and settlement of convertible debt and accounts payable	70	38	—
Common stock issued to settle outstanding indebtedness	98	—	—
Common stock issued for asset acquisition	—	—	25
Common stock issued for exercise of warrant	—	6	—
Common stock issued for services	4	12	1
At end of year	$ 1,431	$ 1,259	$ 948
Additional Paid-in Capital			
At beginning of year	$ 237,505,357	$ 221,027,057	$ 217,993,953
Common stock issued for conversion and settlement of convertible debt and accounts payable	2,774,209	2,449,284	—
Common stock issued to settle outstanding indebtedness	6,499,902	—	—
Beneficial conversion feature on convertible obligation	232,175	—	—
Share-based compensation	1,330,078	471,121	756,599
Fair value of warrants attached convertible debt	—	4,095,780	—
Asset acquisition	—	—	1,407,627
Debt modification	—	418,987	868,878
Common stock issued for cash, net	—	8,243,128	—
Subsidiary equity issued for cash	713,879	800,000	—
At end of year	$ 249,055,600	$ 237,505,357	$ 221,027,057
Accumulated Deficit			
At beginning of year	$(265,134,462)	$(250,322,306)	$(239,882,345)
Net (loss)	(9,956,395)	(14,812,156)	(10,439,961)
At end of year	$(275,090,857)	$(265,134,462)	$(250,322,306)
Non-controlling Interest			
At beginning of year	$ (30,283,427)	$ (24,003,114)	$ (19,309,066)
Asset acquisition	—	—	365,717
Net (loss)	(6,171,385)	(6,280,313)	(5,059,765)
At end of year	(36,454,812)	(30,283,427)	(24,003,114)
Total stockholders' equity/(deficit)	$ (62,488,638)	$ (57,911,274)	$ (53,297,416)

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

ODYSSEY MARINE EXPLORATION, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	12 Month Period Ended December 31, 2021	12 Month Period Ended December 31, 2020	12 Month Period Ended December 31, 2019
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net (loss) before non-controlling interest	$ (16,127,780)	$(21,092,469)	$(15,499,726)
Adjustments to reconcile net loss to net cash (used) in operating activities:			
Note payable interest accretion	45,171	(150,322)	845,892
Accrued non-cash interest related to convertible debt	—	121,398	—
Share-based compensation	1,230,082	192,532	55,200
Depreciation and amortization	8,821	9,322	116,434
(Gain) loss on debt extinguishment	(374,835)	777,484	290,024
(Gain) on sale of equipment	(342,125)	—	—
Beneficial conversion feature on convertible debt, interest expense	232,175	—	—
Director fees settled with equity instruments	—	—	701,396
Change in derivatives liabilities fair value	—	732,958	322,485
Debt modification inducement	—	—	868,878
Right of use asset amortization	145,930	132,764	53,233
Financing fees amortization	133,993	52,213	—
Investment in unconsolidated entity	(883,156)	(870,794)	(747,333)
(Gain) on debt settlement, net	(5,212,902)	—	—
Deferred revenue	(3,818,750)	—	(825,000)
(Increase) decrease in:			
Accounts receivable	(108,610)	261,336	367,828
Other assets	(181,725)	399,082	355,126
Increase (decrease) in:			
Accounts payable	6,292,180	4,563,544	3,690,481
Accrued expenses and other	13,658,052	5,583,783	3,960,783
NET CASH (USED) IN OPERATING ACTIVITIES	(5,303,479)	(9,287,169)	(5,444,299)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Proceeds from sale of equipment	342,125	—	—
Purchase of property and equipment	(19,137)	—	(15,492)
NET CASH PROVIDED BY INVESTING ACTIVITIES	322,988	—	(15,492)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from issuance of loans payable	1,375,511	3,620,977	3,271,181
Debt termination fee	(500,000)	—	—
Proceeds from sale of common stock	—	11,315,000	—
Offering costs paid on sale of common stock	—	(89,642)	—
Proceeds from sale of equity of subsidiary	713,879	800,000	—
Payment of operating lease liability	(142,080)	(123,152)	(48,838)
Repayment of loan and debt obligations	(355,273)	(286,198)	(346,130)
NET CASH PROVIDED BY FINANCING ACTIVITIES	1,092,037	15,236,985	2,876,213
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(3,888,454)	5,949,816	(2,583,578)
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	6,163,205	213,389	2,796,967
CASH AND CASH EQUIVALENTS AT END OF YEAR	$ 2,274,751	$ 6,163,205	$ 213,389
SUPPLEMENTARY INFORMATION:			
Interest paid	$ —	$ 1,275,269	$ 1,544,663
Income taxes paid	$ —	$ —	$ —
Director fees paid with equity	$ 100,000	$ 278,602	$ —
Accounts payable settled with equity	$ —	$ 50,000	$ —
Gain on debt forgiveness	$ 370,400	$ —	$ —
NON-CASH INVESTING AND FINANCING TRANSACTIONS:			

During the quarter ended September 30, 2019, we entered into a new five-year operating lease for our headquarters which resulted in a right-of-use asset and corresponding operating lease liability of $793,036, see NOTE O.

During the quarter ended September 30, 2019, we acquired a 79.9% equity interest in Bismarck Mining Corporation (PNG) LTD (Bismarck) in exchange for 249,584 shares ($1,407,653) of our common stock.

During the quarter ended December 31, 2019, we received $224,916 in non-cash financing pertaining to our litigation financing as described in Note H: Note 9 – Litigation financing. The funder settled a portion of the Company's litigation payables directly with the vendor.

During the year ended December 31, 2020, we received $6,079,702 in non-cash financing pertaining to our litigation financing as described in Note H: Note 9 – Litigation financing. The funder settled a portion of the Company's litigation payables directly with the vendor. Related to this financing, we recorded a debt discount of $1,063,811 and a corresponding increase to additional paid in capital for the fair value of certain warrants that were issued to the funder. We also incurred $400,000 of funder financed debt fees with this financing.

During the year ended December 31, 2020, a lender converted $2,205,804 of convertible debt into 329,498 shares of our common stock. The same lender converted $243,480 of accounts payable into 50,725 shares of common stock.

During the year ended December 31, 2021, we received $5,603,831 in non-cash financing associated with our litigation financing as described in Note H: Note 9 – Litigation financing. The funder paid this amount directly to vendors used in our NAFTA litigation support.

On March 30, 2021, Epsilon Acquisitions LLC converted $1,000,000 of its convertible note payable and $448,697 of accrued interest at a conversion price of $3.52 per share into 411,562 shares of our common stock.

On July 12, 2021, certain creditors converted $1,050,000 of their convertible note payable and $275,582 of accrued interest at a conversion price of $4.67 per share into 283,850 shares of our common stock.

On October 14, 2021, we entered into a Termination and Settlement Agreement with a lender, whereby we issued $6,500,000 of our common stock, paid $500,000 in cash and agreed to pay $2,500,000, which is included in loans payable short-term. In return, the lender forgave $8,574,366 in principal debt, $5,905,993 in accrued interest and $232,543 in accounts payable, see NOTE H (Note 13) for further detail.

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

ODYSSEY MARINE EXPLORATION, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE A – ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization

Odyssey Marine Exploration, Inc. and subsidiaries (the "Company," "Odyssey," "us," "we" or "our") is engaged in deep-ocean exploration. Our innovative techniques are currently applied to mineral exploration, shipwreck cargo recovery, and other marine survey and exploration charter services. Our corporate headquarters are located in Tampa, Florida.

Summary of Significant Accounting Policies

This summary of significant accounting policies of the Company is presented to assist in understanding our financial statements. The financial statements and notes are representations of the Company's management who are responsible for their integrity and objectivity and have prepared them in accordance with our customary accounting practices.

Recent Accounting Pronouncements

Accounting standards not yet adopted

In August 2020, the FASB issued Accounting Standards Update (ASU) No. 2020-06, Debt-Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging-Contracts in Entity's Own Equity (Subtopic 815-40). The amendments in this Update are effective for public business entities that meet the definition of a Securities and Exchange Commission (SEC) filer, excluding entities eligible to be smaller reporting companies as defined by the SEC, for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. For all other entities, the amendments are effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. The Board specified that an entity should adopt the guidance as of the beginning of its annual fiscal year.

The amendments in the above Update affect entities that issue convertible instruments and/or contracts in an entity's own equity. For convertible instruments, the instruments primarily affected are those issued with beneficial conversion features or cash conversion features because the accounting models for those specific features are removed. However, all entities that issue convertible instruments are affected by the amendments to the disclosure requirements in this Update. For contracts in an entity's own equity, the contracts primarily affected are freestanding instruments and embedded features that are accounted for as derivatives under the current guidance because of failure to meet the settlement conditions of the derivatives scope exception related to certain requirements of the settlement assessment. The Board simplified the settlement assessment by removing the requirements (1) to consider whether the contract would be settled in registered shares, (2) to consider whether collateral is required to be posted, and (3) to assess shareholder rights. Those amendments also affect the assessment of whether an embedded conversion feature in a convertible instrument qualifies for the derivatives scope exception. Additionally, the amendments in this Update affect the diluted EPS calculation for instruments that may be settled in cash or shares and for convertible instruments. We have adopted this ASU as of January 1, 2022.

Accounting standards adopted

On October 31, 2018, the SEC adopted a final rule ("New Final Rule") that will replace SEC Industry Guide 7 with new disclosure requirements that are more closely aligned with current industry and global regulatory practices and standards, including NI 43-101. Companies must comply with the New Final Rule for the company's first fiscal year beginning on or after January 1, 2021. We adopted this New Final Rule on January 1, 2021.

Other recent accounting pronouncements issued by the FASB, the AICPA and the SEC did not or are not believed by management to have a material effect, if any, on the Company's financial statements.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its direct and indirect wholly owned subsidiaries, both domestic and international. Equity investments in which we exercise significant influence but do not control

and of which we are not the primary beneficiary are accounted for using the equity method. All significant inter-company and intra-company transactions and balances have been eliminated. The results of operations attributable to the non-controlling interest are presented within equity and net income and are shown separately from the Company's equity and net income attributable to the Company. Some of the existing inter-company balances, which are eliminated upon consolidation, include features allowing the liability to be converted into equity of a subsidiary, which if exercised, could increase the direct or indirect interest of the Company in the non-wholly owned subsidiaries.

Use of Estimates

Management used estimates and assumptions in preparing these consolidated financial statements in accordance with U.S. GAAP. Those estimates and assumptions affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported revenues and expenses. Actual results could vary from the estimates that were used.

Reclassifications

Certain reclassifications have been made to the 2020 consolidated financial statements in order to conform to the classifications used in 2021. The reclassifications had no impact to operations or working capital.

Revenue Recognition and Accounts Receivable

Revenue is recognized when a customer obtains control of promised goods or services, in an amount that reflects the consideration which the Company expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that the Company determines are within the scope of ASC Topic 606, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that the Company will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC Topic 606, the Company assesses the goods or services promised within each contract and determines those that are performance obligations and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied. Sales, value add, and other taxes collected on behalf of third parties are excluded from revenue.

The Company currently generates revenues from service contracts with customers. Currently, there are two sources of revenue, marine services and other services. The contracts for these services provide research, scientific services, marine operations planning, management execution and project management. These services are billed generally on a monthly basis and recognized as revenue as the services are performed. Revenue is recognized at a point in time as services are provided, as the customers simultaneously receive and consume the benefits provided by the Company each month. The Company generally does not receive any upfront consideration for these services, and there is no variable consideration for the services. Costs associated with both services include all direct consulting labor, and minimal supplies, and is charged to operations as a component of Operations and Research.

Accounts receivable are based on amounts billed to customers. Generally accepted accounting principles state an estimate is to be made for an allowance for doubtful accounts. We have determined no allowance is currently necessary. If we were to have a recorded allowance, the accounts receivable would be stated net of the recorded allowance.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand and cash in banks. We also consider all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents, of which we do not have any.

Exploration License

The Company follows the guidance pursuant to ASU 350, "*Intangibles-Goodwill and Other*" in accounting for its Exploration License (see NOTE F). Management determined the rights to use the license to have an indefinite life. This assessment is based on the historical success of renewing the license since 2006, and the fact that management believes there are no legal, regulatory, or contractual provisions that would limit the useful life of the asset. The exploration license is not dependent on another asset or group of assets that could potentially limit the useful life of the exploration license. In the future, the recoverability of the license will be tested whenever circumstances indicate that its carrying amount may not be recoverable per the guidance of the Accounting Standards Codification ("ASC") for topic 360 for Property, Plant and Equipment.

Long-Lived Assets

Our policy is to recognize impairment losses relating to long-lived assets in accordance with the ASC 360 Property, Plant and Equipment. Decisions are based on several factors, including, but not limited to, management's plans for future operations, recent operating results and projected cash flows. Impairment losses are included in depreciation at the time of impairment. We did not have any impairments in 2021, 2020 or 2019.

Property and Equipment and Depreciation

Property and equipment is stated at historical cost. Depreciation is calculated using the straight-line method at rates based on the assets' estimated useful lives which are normally between three and thirty years. Leasehold improvements are amortized over their estimated useful lives or lease term, if shorter. Items that may require major overhauls (such as marine equipment) that enhance or extend the useful life of these assets qualify to be capitalized and depreciated over the useful life or remaining life of that asset, whichever was shorter. All other repairs and maintenance were accounted for under the direct-expensing method and are expensed when incurred.

Earnings Per Share

Basic earnings per share ("EPS") is computed by dividing income available to common stockholders by the weighted-average number of common shares outstanding for the period. In periods when the Company has income, the Company would calculate basic earnings per share using the two-class method, if required, pursuant to ASC 260 *Earnings Per Share.* The two-class method was required effective with the issuance of certain senior convertible notes in the past because these notes qualified as a participating security, giving the holder the right to receive dividends should dividends be declared on common stock. Under the two-class method, earnings for a period are allocated on a pro rata basis to the common stockholders and to the holders of convertible notes based on the weighted average number of common shares outstanding and number of shares that could be issued upon conversion. The Company does not use the two-class method in periods when it generates a loss because the holder of the convertible notes does not participate in losses. Currently, we do not have any outstanding convertible notes that qualify as a participating security.

Diluted EPS reflects the potential dilution that would occur if dilutive securities and other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in our earnings. We use the treasury stock method to compute potential common shares from stock options and warrants and the if-converted method to compute potential common shares from preferred stock, convertible notes or other convertible securities. For diluted earnings per share, the Company uses the more dilutive of the if-converted method or two-class method. When a net loss occurs, potential common shares have an anti-dilutive effect on earnings per share and such shares are excluded from the diluted EPS calculation.

At December 31, 2021, 2020 and 2019 the weighted average common shares outstanding were 13,296,687, 10,538,114 and 9,346,213, respectively. For the periods ending December 31, 2021, 2020 and 2019 in which net losses occurred, all potential common shares were excluded from Diluted EPS because the effect of including such shares would be anti-dilutive.

The potential common shares, in the table following, represent potential common shares calculated using the treasury stock method from outstanding options and warrants that were excluded from the calculation of Diluted EPS:

	2021	2020	2019
Average market price during the period	$ 6.50	$ 5.06	$ 4.93
In the money potential common shares from options excluded	22,493	22,493	22,493
In the money potential common shares from warrants excluded	2,781,314	2,585,179	120,000

Potential common shares from out-of-the-money options and warrants were also excluded from the computation of diluted earnings per share because calculation of the associated potential common shares has an anti-dilutive effect. The following table lists options and warrants that were excluded from diluted EPS.

Per share exercise price	2021	2020	2019
Out of the money options excluded:			
$12.48	136,833	136,833	136,833
$12.84	4,167	4,167	4,167
$26.40	75,158	75,158	75,158
Out-of-the-money warrants excluded:			
$5.76	—	196,135	196,135
$7.16	700,000	700,000	700,000
Total excluded	916,158	1,112,293	1,112,293

The equivalent common shares relating to our unvested restricted stock awards that were excluded from potential common shares used in the earning per share calculation due to having an anti-dilutive effect are:

	2021	2020	2019
Excluded unvested restricted stock awards	476,341	249,391	41,667

The following is a reconciliation of the numerators and denominators used in computing basic and diluted net income per share:

	12 Month Period Ended December 31, 2021	12 Month Period Ended December 31, 2020	12 Month Period Ended December 31, 2019
Net loss	$ (9,956,395)	$(14,812,156)	$(10,439,961)
Numerator, basic and diluted net loss available to stockholders	$ (9,656,395)	$(14,812,156)	$(10,439,961)
Denominator:			
Shares used in computation – basic:			
Weighted average common shares outstanding	13,296,687	10,538,114	9,346,213
Shares used in computation – diluted:			
Weighted average common shares outstanding	13,296,687	10,538,114	9,346,213
Net loss per share – basic and diluted	$ (0.75)	$ (1.41)	$ (1.12)

Income Taxes

Income taxes are accounted for using an asset and liability approach that requires the recognition of deferred tax assets and liabilities for the expected future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax bases. A valuation allowance is provided when it is more likely than not that some portion or the entire deferred tax asset will not be realized.

Stock-based Compensation

Our stock-based compensation is recorded in accordance with the guidance in the ASC topic for *Stock-Based Compensation* (See NOTE L).

Fair Value of Financial Instruments

Financial instruments consist of cash, evidence of ownership in an entity, and contracts that both (i) impose on one entity a contractual obligation to deliver cash or another financial instrument to a second entity, or to exchange other financial

instruments on potentially unfavorable terms with the second entity, and (ii) conveys to that second entity a contractual right (a) to receive cash or another financial instrument from the first entity, or (b) to exchange other financial instruments on potentially favorable terms with the first entity. Accordingly, our financial instruments consist of cash and cash equivalents, accounts receivable, accounts payable, accrued liabilities, derivative financial instruments and mortgage and loans payable. We carry cash and cash equivalents, accounts payable and accrued liabilities, and mortgage and loans payable at the approximate fair market value, and, accordingly, these estimates are not necessarily indicative of the amounts that we could realize in a current market exchange. We carry derivative financial instruments at fair value as is required under current accounting standards.

Derivative financial instruments consist of financial instruments or other contracts that contain a notional amount and one or more underlying variables (e.g., interest rate, security price or other variable), require no initial net investment and permit net settlement. Derivative financial instruments may be free-standing or embedded in other financial instruments. Further, derivative financial instruments are initially, and subsequently, measured at fair value and recorded as liabilities or, in rare instances, assets. We generally do not use derivative financial instruments to hedge exposures to cash-flow, market or foreign-currency risks. However, we have entered into certain other financial instruments and contracts with features that are either (i) not afforded equity classification, (ii) embody risks not clearly and closely related to host contracts, or (iii) may be net-cash settled by the counterparty. As required by ASC 815 – *Derivatives and Hedging*, these instruments are required to be carried as derivative liabilities, at fair value, in our financial statements with changes in fair value reflected in our income.

We adopted ASC Topic 820 for certain financial instruments measured as fair value on a recurring basis. ASC Topic 820 defines fair value, established a framework for measuring fair value in accordance with accounting principles generally accepted in the United States and expands disclosures about fair value measurements. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. ASC Topic 820 established a three-tier fair value hierarchy which prioritizes the inputs used in measuring fair value.

The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements). These tiers include:

Fair Value Hierarchy

The three levels of inputs that may be used to measure fair value are as follows:

Level 1. Quoted prices in active markets for identical assets or liabilities.

Level 2. Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets with insufficient volume or infrequent transactions (less active markets), or model-derived valuations in which all significant inputs are observable or can be derived principally from or corroborated with observable market data for substantially the full term of the assets or liabilities. Level 2 inputs also include non-binding market consensus prices that can be corroborated with observable market data, as well as quoted prices that were adjusted for security-specific restrictions.

Level 3. Unobservable inputs to the valuation methodology are significant to the measurement of the fair value of assets or liabilities. Level 3 inputs also include non-binding market consensus prices or non-binding broker quotes that we were unable to corroborate with observable market data.

At December 31, 2021 and 2020, the Company did not have any financial instruments measured on a recurring basis.

Subsequent Events

We have evaluated subsequent events for recognition or disclosure through the date this Form 10-K is filed with the Securities and Exchange Commission.

NOTE B – CONCENTRATION OF CREDIT RISK

We do not have any outstanding loans that bear variable interest rates thus we do not have any corresponding interest rate risk.

NOTE C – ACCOUNTS RECEIVABLE AND OTHER, NET

Our accounts receivable consisted of the following:

	December 31, 2021	December 31, 2020
Related party	268,867	160,220
Other	—	37
Accounts receivable, net	$ 268,867	$ 160,257

During the quarter ended September 30, 2018, we began providing services for a deep-sea mineral exploration company, CIC Limited ("CIC"), in which our past Chairman of the Board, Greg Stemm, has a controlling and ownership interest. See NOTE J for further information. At December 31, 2021 and 2020, respectively, the company owed us $268,867 and $134,452, respectively.

NOTE D – OTHER CURRENT ASSETS

Our other current assets consist of the following:

	December 31, 2021	December 31, 2020
Prepaid expenses	$ 732,562	$ 582,319
Deposits	44,068	5,075
Total other current assets	$ 776,630	$ 587,394

All prepaid expenses are amortized on a straight-line basis over the term of the underlying agreements. Prepaid expenses are predominantly insurance related. Deposits may be held by various entities for equipment, services, and in accordance with agreements in the normal course of business.

NOTE E – PROPERTY AND EQUIPMENT

Property and equipment consist of the following:

	December 31, 2021	December 31, 2020
Computers and peripherals	535,807	612,286
Furniture and office equipment	1,009,238	1,267,281
Marine equipment	4,057,870	5,416,150
Right to use asset, net	461,109	607,039
	6,064,024	7,902,756
Less: Accumulated depreciation	(5,584,881)	(7,287,999)
Property and equipment, net	$ 479,143	$ 614,757

See Lease commitment in NOTE O – Commitments and Contingencies for further information on right to use asset, net.

NOTE F – EXPLORATION LICENSE

On July 9, 2019, we acquired a 79.9% interest in Bismarck Mining Corporation (PNG) Limited ("Bismarck"), a Papua New Guinea company that was organized for the purpose of exploring the deep waters off the coast for precious metals. We evaluated the transaction under ASU 2017-01 Business Combinations (Topic 805) and determined that Bismarck did not meet the definition of a business so the transaction represented an acquisition of assets rather than a business combination. Asset acquisitions do not give rise to goodwill. Rather, the sum of the fair value of the consideration given, together with transaction costs is allocated to the individual assets acquired and liabilities assumed based on their relative fair values which were more clearly evident and, thus, more reliably measurable at the date of acquisition under ASC 805-50-30-2 *Initial Measurement*. In the future, the recoverability will be tested whenever events or changes in circumstances indicate that its carrying amount may not be recoverable per the guidance of ASC 360-10-35-21 *Subsequent Measurement.* Management has considered whether any triggering events occurred that would cause impairment. Management did not identify any triggering events thus there is no impairment for the year ended December 31, 2021 and 2020.

The consideration paid for the asset acquisition consisted of the following:

Fair value of 249,584 common shares issued	$1,407,653
Direct transaction costs	46,113
Total consideration paid	$1,453,766

The consideration was allocated as follows:

Intangible asset-exploration license rights	$1,821,251
Current assets	1,748
Current liabilities	(3,516)
Less: Non-controlling interest	(365,717)
Total net assets acquired	$1,453,766

Included in this acquisition were the rights to Bismarck's exploration license, which is renewable every two years. Per ASC 350-30-35-3, management has deemed the rights to this license to have an indefinite life. Determining if the rights to the license has an indefinite or finite life required us to consider the nature of the renewal process and any additional economic factors, if any, required when renewing this license. We currently expect to use and renew the related license indefinitely, and we do not believe there are currently any legal, regulatory, or contractual provisions that are expected to limit the useful life of the related exploration license or indicate that the useful life is other than indefinite. The exploration license is also not dependent on, or specifically associated with, another asset or group of assets that would limit the useful life of the intangible asset or indicate that the useful life is other than indefinite. Management's assumptions regarding our ability to successfully renew or extend the exploration license are based on Bismarck's historical experience. Bismarck was established in 2006, and they have historically renewed and extended the exploration license without a lapse in their ability to use the license. The license has also never been revoked. We will not incur significant maintenance costs related to the license. There is an annual fee due of approximately $14,000 to maintain the license. This amount is much less than the carrying amount of the license and the cost is not expected to prohibit continued renewals of the license in the future. Based on all the factors considered above, management believes it is appropriate to assign indefinite useful life to the acquisition of the rights for the exploration license.

NOTE G – INVESTMENT IN UNCONSOLIDATED ENTITY

Neptune Minerals, Inc. (NMI)

Our current investment in NMI consists of 3,092,488 Class B Common non-voting shares and 2,612 Series A Preferred non-voting shares. The preferred shares are convertible into an aggregate of 261,200 shares of Class B non-voting common stock. Our holdings now constitute an approximate 14% ownership in NMI. At December 31, 2021, our estimated share of unrecognized NMI equity-method losses is approximately $21.3 million. We have not recognized the accumulated $21.3 million in our income statement because these losses exceeded our investment in NMI. Our investment has a carrying value of zero as a result of the recognition of our share of prior losses incurred by NMI under the equity method of accounting. We believe it is appropriate to allocate this loss carryforward of $21.3 million to any incremental NMI investment that may be recognized on our balance sheet in excess of zero since the losses occurred when they were an equity-method investment. The aforementioned loss carryforward is based on NMI's last unaudited financial statements as of December 31, 2016. We do not believe losses NMI may have incurred subsequent to the December 31, 2016 audit to be material. We do not have any financial obligations to NMI, and we are not committed to provide financial support to NMI.

Although we are a shareholder of NMI, we have no representation on the board of directors or in management of NMI and do not hold any Class A voting shares. We are not involved in the management of NMI nor do we participate in their policy-making. Accordingly, we are not the primary beneficiary of NMI. As of December 31, 2021, the net carrying value of our investment in NMI was zero in our consolidated financial statements.

Chatham Rock Phosphate, Limited.

During 2012, we performed deep-sea mining exploratory services for Chatham Rock Phosphate, Ltd. ("CRP") valued at $1,680,000. As payment for these services, CRP issued 9,320,348 ordinary shares to us. During March 2017, Antipodes Gold Limited completed the acquisition of CRP. The surviving entity is now named Chatham Rock Phosphate Limited ("CRPL"). In exchange for our 9,320,348 shares of CRP, we received 141,884 shares of CPRL, which represents equity

ownership of, at most, approximately 1% of the surviving entity. Since CRP was a thinly traded stock and pursuant to guidance per ASC 320: *Debt and Equity Securities* regarding readily determinable fair value, we believe it was appropriate to not recognize this amount as an asset nor as revenue during that period. We continue to carry the value of our investment in CPRL at zero in our consolidated financial statements.

CIC Limited

In 2018, we began providing services to CIC (see NOTE C). This company is pursuing deep water exploration permits in foreign waters. Due to the initial structure of the company, we determined this venture to be a variable interest entity (VIE) consistent with ASU 2015-2. We have determined we are not the primary beneficiary of the VIE and, therefore, we have not consolidated this entity. Additionally, we also will record the investment under the cost method as we have determined we do not exercise significant influence over the entity. We will assess our investment for impairment annually and, if a loss in value is deemed other than temporary, an impairment charge will be recorded. At December 31, 2021 and December 31, 2020, the accumulated investment in the entity was $3,253,950 and $2,370,794, respectively, which is classified as an investment in unconsolidated entity in our consolidated balance sheets. We reviewed the following items to assist in determining CIC's composition.

We account for the investments we make in certain legal entities in which equity investors do not have (1) sufficient equity at risk for the legal entity to finance its activities without additional subordinated financial support, or (2) as a group, the holders of the equity investment at risk do not have either the power, through voting or similar rights, to direct the activities of the legal entity that most significantly impact the entity's economic performance, or (3) the obligation to absorb the expected losses of the legal entity or the right to receive expected residual returns of the legal entity. This type of legal entity is referred to as a VIE.

We would consolidate the results of any such entity in which we determined we had a controlling financial interest. We would have a "controlling financial interest" in such an entity if we had both the power to direct the activities that most significantly affect the VIE's economic performance and the obligation to absorb the losses of, or right to receive benefits from, the VIE that could be potentially significant to the VIE. On a quarterly basis, we reassess whether we have a controlling financial interest in our investments we have in these legal entities.

We determine whether any of the entities in which we have made investments is a VIE at the start of each new venture and if a reconsideration event has occurred. At such times, we also consider whether we must consolidate a VIE and/or disclose information about our involvement in a VIE. A reporting entity must consolidate a VIE if that reporting entity has a variable interest (or combination of variable interests) that will absorb a majority of the VIE's expected losses, receive a majority of the VIE's expected residual returns, or both. A reporting entity must consider the rights and obligations conveyed by its variable interests and the relationship of its variable interests with variable interests held by other parties to determine whether its variable interests will absorb a majority of a VIE's expected losses, receive a majority of the VIE's expected residual returns, or both. The reporting entity that consolidates a VIE is called the primary beneficiary of that VIE.

NOTE H –LOANS PAYABLE

The Company's consolidated notes payable consisted of the following:

	December 31, 2021	December 31, 2020
Note 1 – Monaco 2014	—	$ 2,800,000
Note 2 – Monaco 2016	—	1,175,000
Note 3 – MINOSA 1	14,750,001	14,750,001
Note 4 – Epsilon	—	1,000,000
Note 5 – SMOM	—	3,500,000
Note 6 – MINOSA 2	5,050,000	5,050,000
Note 7 – Monaco 2018	—	1,099,367
Note 8 – Promissory note	—	1,245,862
Note 9 – Litigation financing	18,323,097	10,968,729
Note 10 – Payroll Protection Program	—	370,400
Note 11 – EIDL	149,900	149,900
Note 12 – Vendor note payable	484,009	484,009
Note 13 – Monaco	2,500,000	—
	$41,257,007	$42,593,268

Note 1 – Monaco 2014

On August 14, 2014, we entered into a Loan Agreement with Monaco Financial, LLC ("Monaco") pursuant to which Monaco agreed to lend us up to $10.0 million. The loan was issued in three tranches: (i) $5.0 million (the "First Tranche") was advanced upon execution of the Loan Agreement; (ii) $2.5 million (the "Second Tranche") was advanced on October 1, 2014; and (iii) $2.5 million (the "Third Tranche") was advanced on December 1, 2014. The Notes bear interest at a rate equal to 11% per annum. The Notes contained an option whereby Monaco could purchase shares of Oceanica held by Odyssey (the "Share Purchase Option") at a purchase price that is the lower of (a) $3.15 per share or (b) the price per share of a contemplated equity offering of Oceanica which totals $1.0 million or more in the aggregate. The share purchase option was not clearly and closely related to the host debt agreement and required bifurcation.

On December 10, 2015, these promissory notes were amended as part of the asset acquisition agreement with Monaco (See NOTE R in our Form 10-K filed with the Securities and Exchange Commission for the period ended December 31, 2017 for further information). The amendment included the following material changes: (i) $2.2 million of the indebtedness represented by the Notes was extinguished, (ii) $5.0 million of the indebtedness represented by the Notes ceased to bear interest and is only repayable under certain circumstances from certain sources of cash, and (iii) the maturity date on the Notes was extended to December 31, 2017. During March 2016, the maturity date was further extended to April 1, 2018 and the exercise price of the Share Purchase Option was re-priced to $1.00 per share. In October 2018, the parties executed a Forbearance Agreement that extended the period of this Share Purchase Option to a period of one year after this indebtedness is repaid in full. This indebtedness has matured, but Monaco has not demanded payment because we were in negotiations with Monaco. As of the maturity date, the interest rate was adjusted to the default rate of 18% per annum. See "Loan Modification (March 2016)" below. For the twelve months ended December 31, 2021 and 2020, interest expense in the amount of $434,934 and $574,680, respectively, was recorded. The outstanding interest-bearing balance of these Notes was zero at December 31, 2021 and $2.8 million at December 31, 2020, respectively.

On October 4, 2021 we entered into a Termination and Settlement agreement with Monaco that cancelled the entire indebtedness of approximately $5.2 million of principal and accrued interest related to this arrangement. This agreement also terminated all conversion options. See Note 13 below.

Note 2 – Monaco 2016

In March 2016, Monaco agreed to lend us an additional $1,825,000. These loan proceeds were received in full during the first quarter of 2016. The indebtedness bears interest at 10.0% percent per year. All principal and any unpaid interest were due on April 15, 2018. This indebtedness has matured, but Monaco has not demanded payment because we were in negotiations with Monaco. As of the maturity date, the interest rate was adjusted to the default rate of 18% per annum. The current outstanding balance was zero at December 31, 2021 and $1,175,000 at December 31, 2020. The indebtedness was convertible at any time until the maturity date into shares of Oceanica held by us at a conversion price of $1.00 per share. Pursuant to this loan and as security for the indebtedness, Monaco was granted a second priority security interest in (a) one-half of the indebtedness evidenced by the Amended and Restated Consolidated Note and Guaranty, dated September 25, 2015 (the "ExO Note"), in the original principal amount of $18.0 million, issued by Exploraciones Oceanicas S. de R.L. de C.V. to Oceanica Marine Operations, S.R.L. ("OMO"), and all rights associated therewith (the "OMO Collateral"); and (b) all technology and assets in our possession or control used for offshore exploration, including an ROV system, deep-tow search systems, winches, multi-beam sonar, and other equipment. The carrying net book value of this equipment was less than $0.1 million. We unconditionally and irrevocably guaranteed all obligations of ours and our subsidiaries to Monaco under this loan agreement. As further consideration for the loan, Monaco was granted an option (the "Option") to purchase the OMO Collateral. The Option was exercisable at any time before the earlier of (a) the date that is 30 after the loan is paid in full or (b) the maturity date of the ExO Note, for aggregate consideration of $9.3 million, $1.8 million of which would be paid at the closing of the exercise of the Option, with the balance paid in ten monthly installments of $750,000. In October 2018, both parties executed a Forbearance Agreement that extended the Option's 30-day period following a loan payoff to seven (7) months. During 2017, we sold a marine vessel to a related party of Monaco for $650,000. The consideration for this vessel was applied against our loan balance to Monaco in the amount of $650,000.

Accounting considerations

ASC 815 generally requires the analysis of embedded terms and features that have characteristics of derivatives to be evaluated for bifurcation and separate accounting in instances where their economic risks and characteristics are not clearly and closely related to the risks of the host contract. The option to purchase the OMO Collateral is an embedded feature that is not clearly and closely related to the host debt agreement and thus requires bifurcation. Because the option is out of the money, it has no material fair value as of the inception date or currently. The debt agreement did not contain any additional embedded terms or features that have characteristics of derivatives. However, we were required to consider whether the hybrid contract embodied a beneficial conversion feature ("BCF"). The calculation of the effective conversion amount did result in a BCF because the effective conversion price was less than the market price on the date of issuance, therefore a BCF of $456,250 was recorded. This BCF has been fully amortized as of March 31, 2018. For the twelve months ended December 31, 2021 and 2020, interest expense in the amount of $203,096 and $268,350, respectively, was recorded.

Loan modification (December 2015)

In connection with the Acquisition Agreement entered into with Monaco on December 10, 2015, Monaco agreed to modify certain terms of the 2014 loans as partial consideration for the purchase of assets. For the First Tranche ($5,000,000 advanced on August 14, 2014), Monaco agreed to cease interest as of December 10, 2015 and reduce the loan balance by (i) the cash or other value received from the SS *Central America* shipwreck project ("SSCA") or (ii) if the proceeds received from the SSCA project were insufficient to pay off the loan balance by December 31, 2017, then Monaco could seek repayment of the remaining outstanding balance on the loan by withholding Odyssey's 21.25% "additional consideration" in new shipwreck projects performed for Monaco in the future. For the Second Tranche ($2,500,000 advanced on October 1, 2014), Monaco agreed to reduce the principal amount by $2,200,000 leaving a new principal balance of $300,000 and extension of maturity to December 31, 2017. For the Third Tranche ($2,500,000 advanced on December 1, 2014), Monaco agreed to the extension of maturity to December 31, 2017.

On December 10, 2015, the Monaco call option related to the Oceanica shares held by us was extended until December 31, 2017.

Loan modification (March 2016)

In connection with the $1.825 million loan agreement with Monaco in March 2016, the existing $2.8 million 2014 notes were modified. Of the combined total indebtedness of Monaco's Note 1 and Note 2, Monaco can convert this debt into 3,174,603 shares of Oceanica at a fixed conversion price of $1.00 per share, or $3,174,603. Any remaining debt in excess of $3,174,603 is not convertible. Additionally, the modification eliminated Monaco's option ("share purchase option") to purchase 3,174,603 shares of Oceanica stock at a price of $3.15 per share. The modification was analyzed under ASC 480 *Distinguishing Liabilities from Equity* ("ASC 480") to determine if extinguishment accounting was applicable. Under ASC 470-50-40-10 a modification or an exchange that adds or eliminates a substantive conversion option as of the conversion date is always considered substantial and requires extinguishment accounting. Since this modification added a substantive conversion option, extinguishment accounting is applicable. In accordance with the extinguishment accounting guidance (a) the share purchase option was first marked to its pre-modification fair value, (b) the new debt was recorded at fair value and (c) the old debt and share purchased option was removed. The difference between the fair value of the new debt and the sum of the pre-modification carrying amount of the old debt and the share purchase option's fair value represented a gain on extinguishment. ASC 470-50-40-2 indicates that debt restructuring with a related party may be in essence a capital transaction and as a result the gain of $1.2 million was recognized in additional paid in capital upon extinguishment.

On October 4, 2021 we entered into a Termination and Settlement agreement with Monaco that cancelled the entire indebtedness of approximately $2.4 million of principal and accrued interest related to this arrangement. This agreement also terminated all conversion options. See Note 13 below.

Note 3 – MINOSA

On March 11, 2015, in connection with a Stock Purchase Agreement, Minera del Norte, S.A. de C.V. ("MINOSA") agreed to lend us up to $14.75 million. The entire $14.75 million was loaned in five advances from March 11 through June 30, 2015. The outstanding indebtedness bears interest at 8.0% percent per annum. The Promissory Note was amended on April 10, 2015 and on October 1, 2015 so that, unless otherwise converted as provided in the Note, the adjusted principal balance

shall be due and payable in full upon written demand by MINOSA; provided that MINOSA agreed that it shall not demand payment of the adjusted principal balance earlier than the first to occur of: (i) 30 days after the date on which (x) SEMARNAT makes a determination with respect to the current application for the Manifestacion de Impacto Ambiental relating to phosphate deposit project, which determination is other than an approval or (y) Odyssey Marine Enterprises or any of its affiliates withdraws such application without MINOSA's prior written consent; (ii) termination by Odyssey of the Stock Purchase Agreement, dated March 11, 2015 (the "Purchase Agreement"), among Odyssey, MINOSA, and Penelope Mining, LLC (the "Investor"); (iii) the occurrence of an event of default under the Promissory Note; (iv) December 31, 2015; or (v) if and only if the Investor shall have terminated the Purchase Agreement pursuant to Section 8.1(d)(iii) thereof, March 30, 2016. This indebtedness is classified as short-term debt. In connection with the loans, we granted MINOSA an option to purchase our 54% interest in Oceanica for $40.0 million (the "Oceanica Call Option"). On March 11, 2016, the Oceanica Call has expired. Completion of the transaction requires amending the Company's articles of incorporation to (a) effect a reverse stock split, which was implemented on February 19, 2016, (b) adjusting the Company's authorized capitalization, which was also implemented on February 19, 2016, and (c) establishing a classified board of directors (collectively, the "Amendments"). The Amendments have been or will be set forth in certificates of amendment to the Company's articles of incorporation filed or to be filed with the Nevada Secretary of State. As collateral for the loan, we granted MINOSA a security interest in the Company's 54% interest in Oceanica. The outstanding principal balance of this debt was $14.75 million at December 31, 2021 and 2020, respectively. The maturity date of this indebtedness has been amended and matured on March 18, 2017. Per Note 6 MINOSA 2 below, the Minosa Purchase Agreement amended the due date of this note to a due date which may be no earlier than December 31, 2017, that is at least 60 days subsequent to written notice that Minosa intends to demand payment. See Note 6 – MINOSA 2 for further qualifications. During December 2017, MINOSA transferred this debt to its parent company. For the twelve months ended December 31, 2021 and 2020, interest expense in the amount of $1,179,998 and $1,183,230, respectively, was recorded.

Accounting considerations

We have accounted for this transaction as a financing transaction, wherein the net proceeds received were allocated to the financial instruments issued. Prior to making the accounting allocation, we evaluated for proper classification under ASC 480 *Distinguishing Liabilities from Equity* ("ASC 480"), ASC 815 *Derivatives and Hedging* ("ASC 815") and ASC 320 *Property, Plant and Equipment* ("ASC 320").

This debt agreement did not contain any embedded terms or features that have characteristics of derivatives. The Oceanica Call Option is considered a freestanding financial instrument because it is both (i) legally detachable and (ii) separately exercisable. The Oceanica Call Option did not fall under the guidance of ASC 480. Additionally, it did not meet the definition of a derivative under ASC 815 because the option has a fixed value of $40.0 million and does not contain an underlying variable which is indicative of a derivative. This instrument is considered an option contract for a sale of an asset. The guidance applied in this case is ASC 360-20, which provides that in situations when a party lends funds to a seller and is given an option to buy the property at a certain date in the future, the loan shall be recorded at its present value using market interest rates and any excess of the proceeds over that amount credited to an option deposit account. If the option is exercised, the deposit shall be included as part of the sales proceeds; if not exercised, it shall be credited to income in the period in which the option lapses.

Based on the previous conclusions, we allocated the cash proceeds first to the debt at its present value using a market rate of 15%, which is management's estimate of a market rate loan for the Company, with the residual allocated to the Oceanica Call Option, as follows:

	Tranche 1	Tranche 2	Tranche 3	Tranche 4	Tranche 5	Total
Promissory Note	$1,932,759	$5,826,341	$2,924,172	$1,960,089	$1,723,492	$14,366,853
Deferred Income (Oceanica Call Option)	67,241	173,659	75,828	39,911	26,509	383,148
Proceeds	$2,000,000	$6,000,000	$3,000,000	$2,000,000	$1,750,001	$14,750,001

The call option amount of $383,148 represented a debt discount. This discount has been fully accreted up to face value using the effective interest method.

Note 4 – Epsilon

On March 18, 2016 we entered into a Note Purchase Agreement ("Purchase Agreement") with Epsilon Acquisitions LLC ("Epsilon"). Pursuant to the Purchase Agreement, Epsilon loaned us $3.0 million in two installments of $1.5 million on March 31, 2016 and April 30, 2016. The indebtedness bears interest at a rate of 10% per annum and was due on March 18,

2017. We were also responsible for $50,000 of the lender's out of pocket costs. This amount is included in the loan balance. In pledge agreements related to the loans, we granted security interests to Epsilon in (a) the 54 million cuotas (a unit of ownership under Panamanian law) of Oceanica Resources S. de R.L. ("Oceanica") held by our wholly owned subsidiary, Odyssey Marine Enterprises, Ltd. ("OME"), (b) all notes and other receivables from Oceanica and its subsidiary owed to the Odyssey Pledgors, and (c) all of the outstanding equity in OME. Epsilon has the right to convert the outstanding indebtedness into shares of our common stock upon 75 days' notice to us or upon a merger, consolidation, third party tender offer, or similar transaction relating to us at the conversion price of $5.00 per share, which represents the five-day volume-weighted average price of Odyssey's common stock for the five trading day period ending on March 17, 2016. On January 25, 2017, Epsilon provided notice to us that it would convert the initial $3.0 million plus accrued interest per the Restated Note Purchase Agreement at $5.00 per share in accordance with the terms of the agreement. The conversion and issuance of new shares was effective April 10, 2017 and included accrued interest of $302,274 for a total 670,455 shares. Upon the occurrence and during the continuance of an event of default, the conversion price was to be reduced to $2.50 per share. Following any conversion of the indebtedness, Penelope Mining LLC (an affiliate of Epsilon) ("Penelope"), may elect to reduce its commitment to purchase preferred stock of Odyssey under the Stock Purchase Agreement, dated as of March 11, 2015 (as amended, the "Stock Purchase Agreement"), among Odyssey, Penelope, and Minera del Norte, S.A. de C.V. ("MINOSA") by the amount of indebtedness converted.

Pursuant to the Purchase Agreement (a) we agreed to waive our rights to terminate the Stock Purchase Agreement in accordance with the terms thereof until December 31, 2016, and (b) MINOSA agreed to extend, until March 18, 2017, the maturity date of the $14.75 million loan extended by MINOSA to OME pursuant to the Stock Purchase Agreement. The indebtedness may be accelerated upon the occurrence of specified events of default including (a) OME's failure to pay any amount payable on the date due and payable; (b) OME or we fail to perform or observe any term, covenant, or agreement in the Purchase Agreement or the related documents, subject to a five-day cure period; (c) an event of default or material breach by OME, us or any of our affiliates under any of the other loan documents shall have occurred and all grace periods, if any, applicable thereto shall have expired; (d) the Stock Purchase Agreement shall have been terminated; (e) specified dissolution, liquidation, insolvency, bankruptcy, reorganization, or similar cases or actions are commenced by or against OME or any of its subsidiaries, in specified circumstances unless dismissed or stayed within 60 days; (f) the entry of judgment or award against OME or any of its subsidiaries in excess or $100,000; and (g) a change in control (as defined in the Purchase Agreement) occurs.

In connection with the execution and delivery of the Purchase Agreement, we and Epsilon entered into a registration rights agreement pursuant to which we agreed to register new shares of our common stock with a formal registration statement with the Securities and Exchange Commission upon the conversion of the indebtedness.

Accounting considerations

We have accounted for this transaction as a financing transaction, wherein the net proceeds received were allocated to the financial instruments issued. Prior to making the accounting allocation, we evaluated the transaction for proper classification under ASC 480 *Distinguishing Liabilities from Equity* ("ASC 480"), ASC 815 *Derivatives and Hedging* ("ASC 815") and ASC 320 *Property, Plant and Equipment* ("ASC 320").

This debt agreement did not contain any embedded terms or features that have characteristics of derivatives. However, we were required to consider whether the hybrid contract embodied a beneficial conversion feature ("BCF"). The calculation of the effective conversion amount did result in a BCF because the effective conversion price was less than the Company's stock price on the date of issuance, therefore a BCF of $96,000 was recorded. The BCF represents a debt discount which was amortized over the life of the loan.

Loan modification (October 1, 2016)

On October 1, 2016 Odyssey Marine Enterprises, Ltd. ("OME"), entered into an Amended and Restated Note Purchase Agreement (the "Restated Note Purchase Agreement") with Epsilon Acquisitions LLC ("Epsilon"). In connection with the existing $3.0 million loan agreement, Epsilon agreed to lend an additional $3.0 million evidenced by secured convertible promissory notes. The convertible promissory notes bear an interest rate of 10.0% per annum and are due and payable on March 18, 2017. Epsilon has the right to convert all amounts outstanding under the Restated Note into shares of our common stock upon 75 days' notice to OME or upon a merger, consolidation, third party tender offer, or similar transaction relating to us at the applicable conversion price, which is (a) $5.00 per share with respect to the $3.0 million already advanced under the Restated Note and (b) with respect to additional advances under the Restated Note, the five-day volume-weighted average price of our common stock for the five trading day period ending on the trading day immediately prior to the date on which OME

submits a borrowing notice for such advance. Notwithstanding anything herein to the contrary, we shall not issue any of our common stock upon conversion of any outstanding tranche (other than the first $3.0 million already advanced) under this Restated Note in excess of 1,388,769 shares of common stock. The additional tranches were issued as follows: (a) $1,000,000 ("Tranche 3") was issued on October 16, 2016 with a conversion price of $3.52 per share; (b) $1,000,000 ("Tranche 4") was issued on November 15, 2016 with a conversion price of $4.19 per share; and (c) $1,000,000 ("Tranche 5") was issued on December 15, 2016 with a conversion price of $4.13 per share. During 2017, Epsilon assigned Tranche 4 and 5 totaling $2,000,000 of this debt to MINOSA under the same terms as the original debt. See Note – MINOSA 2 below for further detail. On March 30, 2021, Epsilon converted the aggregate indebtedness related to Tranche 3 totaling $1,448,697 into 411,562 shares of our common stock at a conversion price of $3.52 per share.

As an inducement for the issuance of the additional $3.0 million of promissory notes, we also delivered to Epsilon a common stock purchase warrant (the "Warrant") pursuant to which Epsilon has the right to purchase up to 120,000 shares of our common stock at an exercise price of $3.52 per share, which exercise price represents the five-day volume-weighted average price of our common stock for the five trading day period ending on the trading day immediately prior to the day on which the Warrant was issued. Epsilon may exercise the Warrant in whole or in part at any time during the period ending October 1, 2021. The Warrant includes a cashless exercise feature and provides that, if Epsilon is in default of its obligations to fund any advance pursuant to and in accordance with the Restated Note Purchase Agreement, then, thereafter, the maximum aggregate number of shares of common stock that may be purchased under the Warrant shall be the number determined by multiplying 120,000 by a fraction, (a) the numerator of which is the aggregate principal amount of advances that have been extended to the OME by Epsilon pursuant to the Restated Note Purchase Agreement on or after the date of the Warrant and prior to the date of such failure and (b) the denominator of which is $3.0 million. During November 2020, Epsilon exercised this warrant using the cashless exercise feature. This exercise resulted in the issuance of 56,228 of our common shares and the forfeiture of the right to acquire the remaining 63,772 common shares.

Accounting considerations for additional tranches

We evaluated for proper classification under ASC 480 *Distinguishing Liabilities from Equity* ("ASC 480"), ASC 815 *Derivatives and Hedging* ("ASC 815") and ASC 320 *Property, Plant and Equipment* ("ASC 320"). This debt agreement did not contain any embedded terms or features that have characteristics of derivatives. Additionally, the warrant agreement did not contain any terms or features that would preclude equity classification. We were required to consider whether the hybrid contract embodied a beneficial conversion feature ("BCF"). The allocations of the three additional tranches were as follows.

	Tranche 3	Tranche 4	Tranche 5
Promissory Note	$ 981,796	$ 939,935	$1,000,000
Beneficial Conversion Feature ("BCF")*	18,204	60,065	—
Proceeds	$1,000,000	$1,000,000	$1,000,000

A beneficial conversion feature arises when the calculation of the effective conversion price is less than the Company's stock price on the date of issuance. Tranche 5 did not result in a BCF because the effective conversion price was greater than the company's stock price on the date of issuance.

The Warrant's fair value was calculated using the Black-Scholes-Merton ("BSM") pricing model. The aggregate fair value of the Warrant totaled $303,712. Because the Warrant was issued as an inducement to Epsilon to issue additional debt, we recorded an inducement expense of $303,712. For the twelve months ended December 31, 2021 and 2020, interest expense in the amount of $34,520 and $90,136, respectively, was recorded.

Term Extension (March 21, 2017)

On March 21, 2017 we entered into an amendment to the Restated Note Purchase Agreement with Epsilon. In connection with the existing $6.0 million of indebtedness, the adjusted principal balance is due and payable in full upon the earlier of (i) written demand by Epsilon or (ii) such time as Odyssey or the guarantor pays any other indebtedness for borrowed money prior to its stated maturity date. As such the Company amortized the notes up to their face value of $6,050,000 and they were classified as short-term. The principal indebtedness at December 31, 2021 was zero and at December 31, 2020 was $1.0 million.

Note 5 – SMOM

On May 3, 2017, we entered into a Loan and Security Agreement ("Loan Agreement") with SMOM. Pursuant to the Loan Agreement, SMOM agreed to loan us up to $3.0 million as evidenced by a convertible promissory note. As a commitment fee, we assigned the remaining 50% of our Neptune Minerals, LLC receivable to SMOM. This receivable had zero carrying

value on our balance sheet and due to the age and collectability was deemed to have no fair value. The indebtedness bears interest at a rate of 10% per annum and matures on the second anniversary of this Loan Agreement which is May 3, 2019. During January 2021, this Loan Agreement was amended by increasing the interest rate to 18%, effective January 1, 2021. On April 20, 2018, the loan was amended, and the principal amount of the Loan was increased to $3.5 million. The loan balance was zero at December 31, 2021 and $3.5 million at December 31, 2020. The holder had the option to convert up to $2.0 million of any unpaid principal and interest into up to 50% of the equity interest held by Odyssey in Aldama Mining Company, S.de R.L. de C.V. which is a wholly owned subsidiary of ours. The conversion value of $1.0 million equates to 10% of the equity interest in Aldama. If the holder elected to acquire the entire 50% of the equity interest, the Holder had to pay the deficiency in cash. As additional consideration for the loan, the holder has the right to purchase from Odyssey all or a portion of the equity collateral (up to the 50% of the equity interest of Aldama) for the option consideration ($1.0 million for each 10% of equity interests) during the period that is the later of (i) one year after the maturity date and (ii) one year after the loan is repaid in full, the expiration date. The lender was also able to extend the expiration date annually by paying $500,000 for each year extended. For the twelve months ended December 31, 2021 and 2020, interest expense in the amount of $478,111 and $350,958, respectively, was recorded.

Accounting considerations

We have accounted for this transaction as a financing transaction, wherein the net proceeds received were allocated to the financial instruments issued. Prior to making the accounting allocation, we evaluated for proper classification under ASC 480 *Distinguishing Liabilities from Equity* ("ASC 480"), ASC 815 *Derivatives and Hedging* ("ASC 815") and ASC 320 *Property, Plant and Equipment* ("ASC 320").

This debt agreement did not contain any embedded terms or features that have characteristics of derivatives. However, we were required to consider whether the hybrid contract embodied a beneficial conversion feature ("BCF"). The calculation of the effective conversion amount did not result in a BCF because the effective conversion price was equal to the Company's stock price on the date of issuance.

On October 4, 2021 we entered into a Termination and Settlement agreement with Monaco that cancelled the entire indebtedness of approximately $5.2 million of principal and accrued interest related to this arrangement. This agreement also terminated all conversion options. See Note 13 below.

Note 6 – MINOSA 2

On August 10, 2017, we entered into a Note Purchase Agreement (the "Minosa Purchase Agreement") with MINOSA. Pursuant to the Minosa Purchase Agreement, MINOSA agreed to loan Enterprises up to $3.0 million. During 2017, we borrowed $2.7 million against this facility, and Epsilon assigned $2.0 million of its debt to MINOSA. At December 31, 2021 and December 31, 2020, the outstanding principal balance, including the Epsilon assignment, was $5.05 million. The indebtedness is evidenced by a secured convertible promissory note (the "Minosa Note") and bears interest at a rate equal to 10.0% per annum. Unless otherwise converted as described below, the entire outstanding principal balance under this Minosa Note and all accrued interest and fees are due and payable upon written demand by MINOSA; provided, that MINOSA agreed not make a demand for payment prior to the earlier of (a) an event of default (as defined in the Minosa Note) or (b) a date, which may be no earlier than December 31, 2017, that is at least 60 days subsequent to written notice that MINOSA intends to demand payment. MINOSA has not provided any notice they intend to issue a payment demand notice. We unconditionally and irrevocably guaranteed all of the obligations under the Minosa Purchase Agreement and the Minosa Note. MINOSA has the right to convert all amounts outstanding under the Minosa Note into shares of our common stock upon 75 days' notice to us or upon a merger, consolidation, third party tender offer, or similar transaction relating to us at the conversion price of $4.35 per share. During December 2017, MINOSA transferred this indebtedness to its parent company. On July 15, 2021, $404,633 of this indebtedness with accumulated interest of $159,082 was transferred to a director of the Company under the same terms as the original agreement, and that indebtedness continues to be convertible at a conversion price of $4.35 per share. This transaction was reviewed and approved by the independent members of the Company's board of directors.

This debt agreement did not contain any embedded terms or features that have characteristics of derivatives. However, we were required to consider whether the hybrid contract embodied a beneficial conversion feature ("BCF"). The calculation of the effective conversion amount did result in a BCF because the effective conversion price was less than the Company's stock price on the date of issuance, therefore a BCF of $62,925 was recorded. As of December 31, 2017, all of the BCF has been accreted to the income statement. The BCF represented a debt discount that was amortized over the life of the loan. For the twelve months ended December 31, 2021 and 2020, interest expense in the amount of $504,998 and $506,381, respectively, was recorded.

As previously reported, Epsilon loaned us an aggregate of $6.0 million pursuant to an amended and restated convertible promissory Minosa Note, dated as of March 18, 2016, as further amended and restated on October 1, 2016 (the "Epsilon Note"). Since then, Epsilon has assigned $2.0 million of the indebtedness under the Epsilon Note to MINOSA. Along with Epsilon, we entered into a second amended and restated convertible promissory note (the "Second AR Epsilon Note"), which further amends and restates the Epsilon Note. The stated principal amount of the Second AR Epsilon Note is $1.0 million (which reflects the outstanding principal balance remaining after giving effect to Epsilon's (x) previous assignment of $2.0 million of the indebtedness under the Epsilon Note to MINOSA and (y) conversion of $3.0 million of the indebtedness under the Epsilon Note into shares of our common stock). The Second AR Epsilon Note further provides that the outstanding principal balance under the Second AR Epsilon Note and all accrued interest and fees are due and payable upon written demand by Epsilon; provided, that Epsilon agreed not make a demand for payment prior to the earlier of (a) an event of default (as defined in the Second AR Epsilon Note) or (b) a date, which may be no earlier than December 31, 2017, that is at least 60 days subsequent to written notice that MINOSA intends to demand payment.

Upon the closing of the Minosa Purchase Agreement, along with MINOSA, and Penelope Mining LLC, an affiliate of Minosa ("Penelope"), executed and delivered a Second Amended and Restated Waiver and Consent and Amendment No. 5 to Promissory Note and Amendment No. 2 to Stock Purchase Agreement (the "Second AR Waiver"). Pursuant to the Second AR Waiver, Minosa and Penelope consented to the transactions contemplated by the Minosa Purchase Agreement and waived any breach of any representation or warranty and violation of any covenant in the Stock Purchase Agreement, dated as of March 11, 2015, as amended April 10, 2015 (the "SPA"), by and among us, Minosa, and Penelope, arising out of the Company's execution and delivery of the Minosa Purchase Agreement and the consummation of the transactions contemplated thereby. Pursuant to the Second AR Waiver, we also waived, and agreed not to exercise our right to terminate the SPA pursuant to Section 8.1(c)(ii) thereto, both (a) until after the earlier of (i) July 1, 2018, (ii) the date that MINOSA fails, refuses, or declines to fund (or otherwise does not fund) any subsequent loan under the Minosa Purchase Agreement and (iii) demand is made for repayment of all or any part of the indebtedness outstanding under the Minosa Note, the Second AR Epsilon Note, or the Promissory Note, dated as of March 11, 2015, as amended (the "SPA Note"), in the principal amount of $14.75 million that was issued by us to MINOSA under the SPA, and (b) unless on or prior to such termination, the Notes are paid in full.

The Second AR Waiver (x) further provides that following any conversion of the indebtedness evidenced by the Minosa Note, Penelope may elect to reduce its commitment to purchase our preferred stock under the SPA by the amount of indebtedness converted by MINOSA and (y) amends the SPA Note to provide that the outstanding principal balance under the SPA Note and all accrued interest and fees are due and payable upon written demand by MINOSA; provided, that Minosa agreed not make a demand for payment prior to the earlier of (a) an event of default (as defined in the Minosa Note) or (b) a date, which may be no earlier than December 31, 2017, that is at least 60 days subsequent to written notice that Minosa intends to demand payment.

The obligations under the Minosa Note may be accelerated upon the occurrence of specified events of default including (a) our failure to pay any amount payable under the Minosa Note on the date due and payable; (b) our failure to perform or observe any term, covenant, or agreement in the Minosa Note or the related documents, subject to a five-day cure period; (c) the occurrence and expiration of all applicable grace periods, if any, of an event of default or material breach by us under any of the other loan documents; (d) the termination of the SPA; (e) commencement of certain specified dissolution, liquidation, insolvency, bankruptcy, reorganization, or similar cases or actions by or against us, in specified circumstances unless dismissed or stayed within 60 days; (f) the entry of a judgment or award against us in excess of $100,000; and (g) the occurrence of a change in control (as defined in the Minosa Note).

Pursuant to second amended and restated pledge agreements (the "Second AR Pledge Agreements") entered into by us in favor of MINOSA, we pledged and granted security interests to MINOSA in (a) the 54 million cuotas (a unit of ownership under Panamanian law) of Oceanica held by us, (b) all notes and other receivables from Oceanica and its subsidiary owed to us, and (c) all of the outstanding equity in our wholly owned subsidiary, Odyssey Marine Enterprises, Ltd.

In connection with the execution and delivery of the Minosa Purchase Agreement, Odyssey and MINOSA entered into a second amended and restated registration rights agreement (the "Second AR Registration Rights Agreement") pursuant to which Odyssey agreed to register the offer and sale of the shares (the "Conversion Shares") of our common stock issuable upon the conversion of the indebtedness evidenced by the Minosa Note. Subject to specified limitations set forth in the Second AR Registration Rights Agreement, including that we are eligible to use Form S-3, the holder of the Minosa Note can require us to register the offer and sale of the Conversion Shares if the aggregate offering price thereof (before any underwriting discounts and commissions) is not less than $3.0 million. In addition, we agreed to file a registration statement relating to the offer and sale of the Conversion Shares on a continuous basis promptly (but in no event later than 60 days after) after the conversion of the Minosa Note into the Conversion Shares and to thereafter use its reasonable best efforts to have such registration statement declared effective by the Securities and Exchange Commission.

Note 7 – Monaco 2018

During the period ended March 31, 2018, Monaco advanced us $1.0 million that was included in a loan agreement that was executed on April 20, 2018. Monaco also agreed to treat $99,366 of back rent owed by us to Monaco as part of this loan resulting in an aggregate principal amount of $1,099,366 at December 31, 2020. The indebtedness bears interest at 10.0% percent per year. During January 2021, this loan agreement was amended by increasing the interest rate to 18%, effective January 1, 2021. All principal and any unpaid interest are payable on the first anniversary of this agreement, April 20, 2019. This debt is secured by cash proceeds, if any, from our future shipwreck projects we have contracted with Magellan. As additional consideration, their share purchase option expiration date, as discussed in Note 1 – Monaco 2014 and Note 2 – Monaco 2016 above, has been extended from 30 days to seven months after the note becomes paid in full For the twelve months ended December 31, 2021 and 2020, interest expense in the amount of $209,229 and $138,333, respectively, was recorded.

On October 4, 2021 we entered into a Termination and Settlement agreement with Monaco that cancelled the entire indebtedness of approximately $1.6 million of principal and accrued interest related to this arrangement. This agreement also terminated all conversion options. As a result, the principal amount is zero at December 31, 2021. See Note 13 below.

Note 8 – Promissory note

On July 12, 2018, we entered into a Note and Warrant Purchase Agreement (the "Purchase Agreement") with two individuals (the "Lenders"), one of whom holds in excess of 5.0% of our outstanding common stock. Pursuant to the Purchase Agreement, the Lenders agreed to lend an aggregate of $1,050,000 to us, which was advanced in three tranches on July 12, 2018, $500,000, August 17, 2018, $300,000 and October 4, 2018, $250,000. The indebtedness is evidenced by secured convertible promissory notes (the "Notes") and bears interest at a rate equal to 8.0% per annum. Unless otherwise converted as described below, the entire outstanding principal balance under the Notes and all accrued interest and fees are due and payable on July 12, 2019. See "Term Extension (July 8, 2019)" below.

At any time after to the first to occur of (a) a sale by us of additional Notes or (b) September 12, 2018, the Lenders have the right to convert all amounts outstanding under the Notes into either (x) shares of our common stock at the conversion rate of $8.00 per share, (y) $500,000 of the indebtedness owed by Exploraciones Oceanicas S. de R. L. de C.V. ("ExO") to Oceanica Marine Operations, S.R.L. ("OMO"), or (z) a 7.5% interest in Aldama Mining Company, S. de R. L. de C.V. ("Aldama"). We indirectly hold a controlling interest in ExO; OMO and Aldama are indirect, wholly owned subsidiaries of ours.

In connection with the issuance and sale of the Notes, we issued warrants to purchase common stock (the "Warrants") to the Lenders. The Lenders may exercise the Warrants to purchase an aggregate of 65,625 shares of our common stock at an exercise price of $12.00 per share. The Warrants are exercisable during the period commencing on the date on which the Notes are converted into shares of our common stock and ending on July 12, 2021.

Pursuant to a Pledge Agreement, dated as of July 12, 2018 (the "Pledge Agreement"), our obligations under the Notes are secured by a pledge of a portion of Odyssey's ownership interest in Aldama and another entity.

Pursuant to a Registration Rights Agreement (the "Rights Agreement") among us and the Lenders, we granted the Lenders "piggy-back" registration rights with respect to the shares of our common stock issuable upon conversion of the Notes and the exercise of the Warrants.

The Purchase Agreement, the Notes, the Warrants, the Pledge Agreement, and the Rights Agreement include representations and warranties and other covenants, conditions, and other provisions customary for comparable transactions.

We have accounted for this transaction as a financing transaction, wherein the net proceeds received were allocated to the financial instruments issued. Prior to making the accounting allocation, we evaluated the transaction for proper classification under ASC 480 Distinguishing Liabilities from Equity ("ASC 480"), ASC 815 Derivatives and Hedging ("ASC 815").

We determined that the debt achieved conventional convertible status and that the equity conversion option was in the money at inception which required the calculation of a beneficial conversion feature ("BCF"). The fair value of the warrants

and BCF component exceeded the amount of proceeds, therefore, they were limited to the cash proceeds of $1,050,000 at December 31, 2018. As a result, there was no value allocated to the debt at inception. The debt was being accreted to face value over its term using the effective interest method. The face value of this debt was zero at December 31 2021 and $1.05 million at December 31, 2020. For the twelve months ended December 31, 2021 and 2020, interest expense in the amount of $54,734 and $97,652, respectively, was recorded.

Term Extension (July 8, 2019)

On July 8, 2019, Odyssey and the Lenders entered into a Second Amendment to Note and Warrant Purchase Agreement and Note and Warrant Modification Agreement (the "Second Amendment") pursuant to which certain terms and provisions of the Notes and Warrants were amended or otherwise modified. The material terms and provisions that were amended or otherwise modified are as follows:

- the maturity date of the Notes was extended by one year, to July 12, 2020 (the parties are currently in discussions to further extend the maturity date of the Notes);
- the conversion rate of the Notes and the exercise price of the Warrants were modified to $5.756, which represented the "market price" of Odyssey's common stock as of July 7, 2019, the day before the Second Amendment was signed;
- the Notes are unsecured;
- the Notes are convertible only into shares of Odyssey common stock; and
- the modified Warrants are exercisable at any time until July 8, 2024 to purchase an aggregate of 196,135 shares of our common stock.

We evaluated the amendment's impact on the accounting for the Note in accordance with ASC 470-50-40-6 through 12 to determine whether extinguishment accounting was appropriate. The modification had a cash flow effect on a present value basis of less than 10%. However, the reduction in the conversion price resulted in a change in the fair value of the embedded conversion option that was more than 10% of the carrying value of the Note immediately prior to the modification. Because the amendment resulted in a substantial modification, extinguishment accounting was required, and we recorded a loss on the extinguishment of debt of $290,024. The extinguishment accounting resulted in a fair value reacquisition price of this debt of $1,340,024. The premium of $290,024 was being amortized over the remaining life of the debt. The warrant modification was treated as an inducement to extend the debt therefore the fair value of the warrants of $868,878 was a period expense and charged to interest expense with an offset to equity.

Term Extension (August 14, 2020)

On August 14, 2020, we entered into a Third Amendment to Note and Warrant Purchase Agreement and Note and Warrant Modification Agreement (the "Third Amendment") with the Lenders. Certain terms and provisions of the Notes were modified, and we issued a new warrant to purchase common stock to each of the Lenders as consideration for them entering into the Third Amendment. The warrants have an exercise price of $4.67 and are exercisable any time until August 14, 2023. Material terms and provisions that were amended or otherwise modified are as follows:

- the maturity date of the Notes was extended by one year, to July 12, 2021 and
- the conversion rate of the Notes was modified to $4.67.

As of August 14, 2020, the aggregate amount of indebtedness outstanding under the Notes was $1,232,846. As amended by the Third Amendment, the Notes are convertible into an aggregate of 263,993 shares of our common stock, and the new Warrants are exercisable to purchase an aggregate of 131,996 shares of our common stock for $4.67 per share.

The modification of the Notes and the issuance of the warrants, were evaluated under ASC 470-50-40, "Debt Modification and Extinguishments." By applying the guidance, the Notes were determined to be substantially different and the transaction qualified for extinguishment accounting. As a result, we recorded a loss on extinguishment of approximately $777,500, which included the fair value of the warrants given as consideration for the modification. The premium of $358,497 was amortized over the remaining life of the debt. The related amortization for the years ended December 31, 2021 and
2020 was $195,863 and $323,171, respectively. The unamortized premium at December 31, 2021 was zero and at December 31, 2020 it was $195,863. Upon maturity of this indebtedness on July 12, 2021, the Lenders converted the Note and interest totaling $1,325,582 into 283,850 shares of our common stock. The conversion price was $4.67 per share of common stock.

Note 9 – Litigation Financing

On June 14, 2019, Odyssey and Exploraciones Oceánicas S. de R.L. de C.V., our Mexican subsidiary ("ExO" and, together with Odyssey, the "Claimholder"), and Poplar Falls LLC (the "Funder") entered into an International Claims Enforcement Agreement (the "Agreement"), pursuant to which the Funder agreed to provide financial assistance to the Claimholder to facilitate the prosecution and recovery of the claim by the Claimholder against the United Mexican States under Chapter Eleven of the North American Free Trade Agreement ("NAFTA") for violations of the Claimholder's rights under NAFTA related to the development of an undersea phosphate deposit off the coast of Baja Sur, Mexico (the "Project"), on our own behalf and on behalf of ExO and United Mexican States (the "Subject Claim"). Pursuant to the Agreement, the Funder agreed to specified fees and expenses regarding the Subject Claim (the "Claims Payments") incrementally and at the Funder's sole discretion.

Under the terms of the Agreement, the Funder agreed to make Claims Payments in an aggregate amount not to exceed $6,500,000 (the "Maximum Investment Amount"). The Maximum Investment Amount will be made available to the Claimholder in two phases, as set forth below:

(c) a first phase, in which the Funder shall make Claims Payments in an aggregate amount no greater than $1,500,000 for the payment of antecedent and ongoing costs ("Phase I Investment Amount"); and

(d) a second phase, in which the Funder shall make Claims Payments in an aggregate amount no greater than $5,000,000 for the purposes of pursuing the Subject Claim to a final award ("Phase II Investment Amount").

Upon exhaustion of the Phase I Investment Amount, the Claimholder will have the option to request Tranche A of the Phase II Investment Amount, consisting of funding up to $3.5 million ("Tranche A Committed Amount"). Upon exhaustion of the Tranche A Committed Amount, the Claimholder will have the option to request Tranche B of the Phase II Investment Amount, consisting of funding of up to $1.5 million ("Tranche B Committed Amount"). The Claimholder must exercise its option to receive the Tranche A Committed Amount in writing, no less than thirty days before submitting a Funding Request to the Funder under Tranche A. The Claimholder must exercise its option to receive the Tranche B Committed Amount in writing within forty-five days after the exhaustion of the Tranche A Committed Amount. Pursuant to the Agreement, the Claimholder agreed that, upon exercising the Claimholder's option to receive funds under Phase I, Tranche A of Phase II, or Tranche B of Phase II, the Funder will be the sole source of third-party funding for the specified fees and expenses of the Subject Claim under each respective phase and tranche covered by the option exercised, and the Claimholder will obtain funding for such fees and expenses, only as set forth in the Agreement. The Funder was due closing fee of $80,000 for the Phase I Investment Amount, and $80,000 for the Phase II Investment Amount to pay third parties in connection with due diligence and other administrative and transaction costs incurred by the Funder prior to and in furtherance of execution of the Agreement.

Upon the Funder making Claims Payments to the Claimholder or its designees in an aggregate amount equal to the Maximum Investment Amount, the Funder has the option to continue funding the specified fees and expenses in relation to the Subject Claim on the same terms and conditions provided in the Agreement. The Funder must exercise its option to continue funding in writing, within thirty days after the Funder has made Claims Payments in an aggregate amount equal to the Maximum Investment Amount. If the Funder exercises its option to continue funding, the parties agreed to attempt in good faith to amend the Agreement to provide the Funder with the right to provide at the Funder's discretion funding in excess of the Maximum Investment Amount, in an amount up to the greatest amount that may then be reasonably expected to be committed for investment in Subject Claim. If the Funder declines to exercise its option, the Claimholder may negotiate and enter into agreements with one or more third parties to provide funding, which shall be subordinate to the Funder's rights under the Agreement.

The Agreement provides that the Claimholder may at any time without the consent of the Funder either settle or refuse to settle the Subject Claim for any amount; provided, however, that if the Claimholder settles the Subject Claim without the Funder's consent, which consent shall not be unreasonably withheld, conditioned, or delayed, the value of the Recovery Percentage (as defined below) will be deemed to be the greater of (a) the Recovery Percentage (under Phase I or Phase II, as applicable), or (b) the total amount of all Claims Payments made in connection with such Subject Claim multiplied by three (3).

If the Claimholder ceases the Subject Claim for any reason other than (a) a full and final arbitral award against the Claimholder or (b) a full and final monetary settlement of the claims, including in particular, for a grant of an environmental permit to the Claimholder allowing it to proceed with the Project (with or without a monetary component), all Claims Payments under Phase I and, if Claimholder has exercised the corresponding option, the Tranche A Committed Amount and Tranche B Committed Amount, shall immediately convert to a senior secured liability of the Claimholder. This sum shall incur an annualized internal rate of return (IRR) of 50.0% retroactive to the date each Funding Request was paid by the Funder (under Phase I), or, to the conversion date for the Tranche A Committed Amount and Tranche B Committed Amount of Phase II if the Claimholder has exercised the respective option (collectively, the "Conversion Amount"). Such Conversion Amount and any and all accrued IRR shall be payable in-full by the Claimholder within 24 months of the date of such conversion, after which time any outstanding Conversion Amounts, shall accrue an (IRR) of 100.0%, retroactive to the conversion date (the "Penalty Interest Amount"). The Claimholder will execute such documents and take other actions as necessary to grant the Funder a senior security interest on and over all sums due and owing by the Claimholder in order to secure its obligation to pay the Conversion Amount to the Funder. If the Claimholder ceases the Subject Claim due to the grant of an environmental permit (with or without a monetary component), all Claims Payments under Phase 1 and, if the Claimholder has exercised the corresponding option, the Tranche A Committed Amount and Tranche B Committed Amount shall immediately convert to a senior secured liability of the Claimholder and shall incur an annualized an IRR of 50.0% on the Conversion Amount, from the conversion date. Management has estimated it is more likely than not the Subject Claim will result in the issuance of the environmental permit requiring us to record interest under Generally Accepted Accounting Principles. Reliance should not be placed on this estimate in determining the likely outcome of the Subject Claim.

If, at any time after exercising its option to receive funds under either Tranche A or Tranche B of Phase II, the Claimholder wishes to fund the Subject Claim with its own capital ("Self-Funding") (which excludes any Claims Payments made, either directly or indirectly, by any other third party), the Claimholder shall immediately pay to the Funder the Conversion Amount, provided that this requirement shall not apply if, after the Funder has made Claims Payments in an aggregate amount equal to the Maximum Investment Amount, the Funder does not exercise its option to provide Follow-On Funding.

In the event of any receipt of proceeds resulting from the Subject Claim ("Proceeds"), the Funder shall be entitled to any additional sums above the Conversion Amount to which the Funder is entitled as described below. Should the Claimholder cease the Subject Claim as described above after Self-Funding the Claim, accrued IRR and Penalty Interest shall be calculated and paid to the Funder as set forth above. The Funder's rights to the Recovery Percentage as defined below shall survive any decision by Claimholder to utilize Self-Funding. The parties acknowledge this Agreement constitutes a sale of the right to a portion of the Proceeds (if any) arising from the Subject Claim as set forth in this Agreement. The Claimholder has relinquished its right to the portion of the proceeds, if any, that the Funder would have the right to as described below. This sale of proceeds is being accounted for under the guidance of ASC 470-10-25 *Recognition (Sales of Future Revenues)*

On each Distribution Date, distributions of the Proceeds shall be made to the Claimholder and the Funder in accordance with subparagraph (a) or (b) below (the "Recovery Percentage"), as applicable:

(a) If the Claimholder receives only the Phase I Investment Amount from the Funder, the first Proceeds shall be distributed as follows:

(i) first, 100.0% to the Funder, until the cumulative amount distributed to the Funder equals the total Claims Payments paid by the Funder under Phase I;

(ii) second, 100.0% to the Funder until the cumulative amount distributed to the Funder equals an IRR of 20% of Claims Payments paid by the Funder under Phase I ("Phase I Compensation"), per annum; and

(iii) thereafter, 100.0% to the Claimholder.

(b) If the Claimholder exercises its options to receive Tranche A or both Tranche A and Tranche B of the Phase II Investment Amount, the first Proceeds shall be distributed as follows:

(i) first, 100.0% to the Funder until the cumulative amount distributed to the Funder equals the total Claims Payments paid by the Funder under Phases I and II;

(ii) second, 100.0% to the Funder until the cumulative amount distributed to the Funder equals an additional 300.0% of Phase I Investment Amount; plus an additional 300% of the Tranche A Committed Amount (i.e. 300.0% of $3.5 million), less any amounts remaining of the Tranche A Committed Amount that

the Funder did not pay as Claims Payments; plus an additional 300.0% of the Tranche B Committed Amount (i.e. 300.0% of $1.5 million), if the Claimholder exercises the Tranche B funding option, less any amounts remaining of the Tranche B Committed Amount that the Funder did not pay as Claims Payments;

(iii) third, for each $10,000 in specified fees and expenses paid by the Funder under Phase I and Phase II and any amounts over each $10,000 of the Tranche A Committed Amount and the Tranche B Committed Amount (if the Claimholder exercises the Tranche B funding option), 0.01% of the total Proceeds from any recoveries after repayment of (i) and (ii) above, to the Funder; and

(iv) thereafter, 100% to the Claimholder.

The Agreement provides that if no Proceeds are ever paid to or received by the Claimholder or its representatives and if the environmental permit is not issued, the Funder shall have no right of recourse or right of action against the Claimholder or its representatives, or any of their respective property, assets, or undertakings, except as otherwise specifically contemplated by the Agreement. If (a) Proceeds are paid to or received by the Claimholder or its representatives; (b) such Proceeds are promptly applied and/or distributed by the Claimholder or on behalf of the Claimholder in accordance with the terms of the Agreement; and (c) the amount received by the Funder as a result thereof is not sufficient to pay all of the Recovery Percentage and all of the amounts due to the Funder under the Agreement, then (provided that all of the Proceeds which the Funder will ever be entitled to have been paid to or received by the Funder), the Funder shall have no right of recourse or action against the Claimholder or its Representatives, or any of their property, assets, or undertakings, except as otherwise specifically contemplated by the Agreement. Pursuant to the Agreement, the Claimholder acknowledged the Funder's priority right, title, and interest in any Proceeds, including against any available collateral to secure its obligations under the Agreement, which security interest shall be first in priority as against all other security interests in the Proceeds. The Claimholder also acknowledged and agreed to execute and authorize the filing of a financing statement or similar and to take such other actions in such jurisdictions as the Funder, in its sole discretion, deems necessary and appropriate to perfect such security interest. The Agreement also includes representations and warranties, covenants, conditions, termination and indemnification provisions, and other provisions customary for comparable arrangements.

Amendment and Restatement (January 31, 2020)

On January 31, 2020, the Claimholder and the Funder entered into an Amended and Restated International Claims Enforcement Agreement (the "Restated Agreement"). The material terms and provisions that were amended or otherwise modified are as follows:

- The Funder agreed to provide up to $2.2 million in Arbitration Support Funds for the purpose of paying the Claimholder's litigation support costs in connection with Subject Claim;
- A closing fee of $200,000 has been retained by the Funder in connection with due diligence and other transaction costs incurred by the Funder;
- A warrant was issued to purchase our common stock which is exercisable for a period of five years beginning on the earlier of (a) the date on which the Claimholder ceases the Subject Claim for any reason other than a full and final arbitral award against the Claimholder or a full and final monetary settlement of the claims or (b) the date on which Proceeds are received and deposited into escrow. The exercise price per share is $3.99, and the Funder can exercise the warrant to purchase the number of shares of our common stock equal to the dollar amount of Arbitration Support Funds provided to us pursuant to the Restated Agreement divided by the exercise price per share (subject to customary adjustments and limitations); and
- All other terms in the Restated Agreement are substantially the same as in the original Agreement.

During 2020, the Funder provided us with $2.0 million of the Arbitration Support Funds, and we incurred $200,000 in related fees that were treated as an additional advance. Upon each funding, the proceeds were allocated between debt and equity for the warrants based on the relative fair value of the two instruments. As a result, there was a debt discount of $1,063,811 which is being amortized over the expected remaining term of the agreement using the effective interest method which is charged to interest expense.

Although the warrants only become exercisable upon the occurrence of future events, they are considered issued for accounting purposes and were valued using a binomial lattice model. The expected volatility assumption was based on the historical volatility of our common stock. The expected life assumption was primarily based on management's expectations of when the Warrants will become exercisable and the risk-free interest rate for the expected term of the warrant is based on the U.S. Treasury yield curve in effect at the time of measurement.

Second Amendment and Restatement (December 12, 2020)

On December 12, 2020, the Claimholder and the Funder entered into a Second Amended and Restated International Claims Enforcement Agreement (the "Second Restated Agreement") relating to the Subject Claim. Under the terms of the Second Restated Agreement, the Funder has made and agreed to make Claims Payments in an aggregate amount not to exceed $20,000,000 (the "Maximum Investment Amount"). The Second Restated Agreement requires the Funder to make Claims Payments in an aggregate amount no greater than $10,000,000 for the purposes of pursuing the Subject Claim to a final award ("Phase III Investment Amount"). We also incurred $200,000 in related fees which were treated as an additional advance. This Second Restated Agreement includes the same representations and warranties, covenants, conditions, termination and indemnification provisions, and other provisions as in the original agreement.

Third Amendment and Restatement (June 14, 2021)

On June 14, 2021, the Claimholder and the Funder entered into a Third Amended and Restated International Claims Enforcement Agreement (the "Third Restated Agreement") relating to the Subject Claim. Under the terms of the Third Restated Agreement, the Funder agreed to make Claims Payments in an aggregate amount not to exceed $25,000,000, an increase of $5.0 million (the "Incremental Amount"). The Third Restated Agreement requires the Claimholder to request $2.5 million of the Incremental Amount (the "First $2.5 Million"). Within 15 days after exhaustion of the First $2.5 Million, the Claimholder may either (a) request the remaining $2.5 million (the "Second $2.5 Million") of the Incremental Amount or (b) notify the Funder that the Claimholder has decided to self-fund the Second $2.5 Million. We also incurred $80,000 in related fees which were treated as an additional advance. This Third Restated Agreement includes the same representations and warranties, covenants, conditions, termination and indemnification provisions, and other provisions as in the original agreement.

For the twelve months ended December 31, 2021 and 2020, interest expense in the amount of $7,354,940 and $3,668,242, respectively, was recorded. For the years ended December 31, 2021 and 2020, we recorded $241,034 and $172,849, respectively, of interest expense from the amortization of the debt discount and $133,993 and $52,214 interest from the fee amortization, respectively. The December 31, 2021 and December 31, 2020 carrying value of the debt is $18,323,097 and $10,968,729, respectively, and is net of unamortized debt fees of $293,793 and $347,786, respectively, as well as the net unamortized debt discount of $649,928 and $890,962, respectively, associated with the fair value of the warrant. The total face value of this obligation at December 31, 2021 and December 31, 2020 was $19,266,818 and 12,207,477, respectively.

Note 10 – Payroll protection program

We applied to Fifth Third Bancorp ("Fifth Third") under the Small Business Administration (the "SBA") Paycheck Protection Program of the Coronavirus Aid, Relief and Economic Security Act of 2020 (the "CARES Act") for a loan of $370,400 (the "Loan"), and the Loan was made on April 16, 2020. The proceeds of the Loan were used to cover payroll costs, rent and utilities in accordance with the relevant terms and conditions of the CARES Act.

The Loan, which is evidenced by promissory note issued by us (the "Promissory Note"), has a two-year term, matures on April 16, 2022, and bears interest at a rate of 0.98% per annum. Monthly principal and interest payments, less the amount of any potential forgiveness (discussed below), will commence seven months from the month this Note is dated. We did not provide any collateral or guarantees for the Loan, nor did we pay any facility charge to obtain the Loan. The Promissory Note provides for customary events of default, including, among others, those relating to failure to make payment, bankruptcy, breaches of representations and material adverse effects. Odyssey may prepay the principal of the Loan at any time without incurring any prepayment charges. For the twelve months ended December 31, 2021 and 2020, interest expense in the amount of $1,788 and $936, respectively, was recorded. At December 31, 2021, the outstanding principal was zero and at December 31, 2020, was $370,400. We applied for 100% forgiveness with Fifth Third Bank during March 2021. In July 2021, we received communication from Fifth Third Bank and the SBA confirming 100% of this Loan was forgiven and paid in full effective July 1, 2021. The forgiven amount was included in Other income in our Consolidated Statements of Operations**.**

Note 11 – Emergency Injury Disaster Loan

On June 26, 2020, we executed the standard loan documents required for securing an Economic Injury Disaster Loan (the "EIDL Loan") from the United States Small Business Administration (the "SBA"). The principal amount of the EIDL Loan is $149,900, with proceeds to be used for working capital purposes. Interest on the EIDL Loan accrues at the rate of

3.75% per annum and installment payments, including principal and interest of $731, are due monthly beginning 12 months from the date of the EIDL Loan. In early 2021, the SBA extended this 12 month period to 24 months setting the first payment due date in May 2022. The balance of principal and interest is payable thirty years from the date of the promissory note. In connection with the EIDL Loan, the Company executed the EIDL Loan documents, which include the SBA Secured Disaster Loan Note, dated May 16, 2020, the Loan Authorization and Agreement, dated May 16, 2020, and the Security Agreement, dated May 16, 2020, each between the SBA and the Company. For the twelve months ended December 31, 2021 and 2020, interest expense in the amount of $10,102 and $0, respectively, was recorded. At December 31, 2021 and 2020, the outstanding principal balance was $149,900.

Note 12 – Vendor note payable

We currently owe a vendor $484,009 as an interest-bearing trade payable. This trade payable bears simple annual interest at a rate of 12%. The balance due was $484,009 at December 31, 2021 and 2020. As collateral, we granted the vendor a primary lien on certain of our equipment. The carrying value of this equipment is zero. This agreement matured in August 2018. During the period ended June 30, 2018, we sold various marine equipment to Magellan for $1.0 million and the assumption of this vendor's trade payable and accrued interest, however, we remain as guarantor on this trade payable. Included in this equipment is the equipment noted above the vendor has a primary lien on. The vendor consented to Magellan's assumption of this debt but did not release us from our obligations. If Magellan defaults and the vendor forecloses on this equipment currently in Magellan's possession, we would then have a contingent liability to Magellan in the amount of $0.5 million for two of the key assets. The Company subsequently received back one of the two key assets thus reducing the contingent liability to $0.3 million. For the twelve months ended December 31, 2021 and 2020, interest expense in the amount of $58,083 and $58,240, respectively, was recorded.

Note 13 – Monaco

On October 4, 2021, we and Monaco Financial, LLC and certain associated entities (collectively with Monaco, the "Monaco Parties") entered into a Termination and Settlement Agreement (the "Termination Agreement"). We were parties to various loan arrangements and other commercial contractual relationships, and the purposes of the Termination Agreement were to terminate the loan agreements and contractual relationships and to settle the outstanding obligations thereunder between us and the Monaco Parties. As for loan arrangements that relate to this transaction, see above notes: Note 1 Monaco – 2014, Note 2 Monaco – 2016, Note 5 SMOM and Note 7 Monaco – 2018.

Pursuant to the Termination Agreement, the loan agreements and contractual relationships were terminated, and we agreed to (a) issue 984,848 shares of our common stock (the "Settlement Shares") to Monaco and (b) pay Monaco an aggregate amount of $3.0 million (the "Settlement Cash") no later than December 1, 2021. The Settlement Shares were issued at a price equal to $6.60 per share, totaling $6.5 million, which was negotiated by the parties with reference to the recent market prices of our common stock and the other terms of the Termination Agreement. We delivered $500,000 of the Settlement Cash to Monaco upon execution and delivery of the Termination Agreement. At Monaco's option, Monaco has the right, but not the obligation, to receive the remaining $2.5 million in shares of our common stock rather than in cash. This amount was to be settled December 1, 2021 but remained outstanding at December 31, 2021. This indebtedness does not carry an interest rate. If Monaco exercises the right, Odyssey will issue to Monaco the number of shares determined by dividing $2.5 million by the greater of $4.95 or 90% of the then-applicable five-day volume-weighted average price per share of common stock. Under the terms of the Termination Agreement, (a) the Monaco Parties agreed that approximately $14.5 million of indebtedness, which includes accrued interest, owed by us to the Monaco Parties was satisfied in full and (b) certain of the Monaco Parties assigned to us all of their right, title, and interest in a portion of the proceeds from a specified shipwreck project. If received by us, these proceeds will be applied to the $2.5 million obligation. As a result of the termination of the loan agreements and contractual relationships, (x) our right to receive a percentage of the proceeds derived by the Monaco Parties from certain shipwreck projects was terminated, and (y) Monaco's option to convert certain indebtedness held by it into shares of Oceanica Resources, S. de R.L. held indirectly by us was terminated. The Termination Agreement also sets forth mutual releases and other customary representations, warranties, and covenants of the parties. The Company determined that the embedded conversion feature was clearly and closely related to the host contract and met the scope exception under FASB ASC 815-40. Thus, it did not require derivative liability classification under ASC 815. The Company then evaluated the conversion feature under FASB ASC 470-20, "Debt with conversion and other options" for consideration of any beneficial conversion features ("BCF"). Based on the market price of the common stock on the date of the agreement as compared to the conversion price, they determined there was a BCF of 232,175 which was recorded in additional paid-in capital. A BCF results in a debt discount which should be amortized over the stated maturity of the convertible instrument, or the earliest potential conversion date. Since the contract was convertible upon issuance, the discount was immediately accreted and charged to interest expense.

As a result of the Termination Agreement, we recognized a gain on debt settlement of approximately $5.2 million, which represented the difference between the loan principal, accrued interest and accounts payable forgiven of approximately $14.7 million and total consideration given of approximately $9.5 million.

The shares of common stock issuable under the Termination Agreement were offered and sold pursuant to a base prospectus and a prospectus supplement, both filed pursuant to Odyssey's shelf registration statement on Form S-3 (File No. 0333-227666).

Accrued interest

Total accrued interest associated with our financings was $21,875,753 and $18,002,386 as of December 31, 2021 and December 31, 2020, respectively.

Long-Term Obligation Maturities:

We have two obligations that span greater than twelve months. For our lease obligations, see Lease commitment in NOTE O – Commitments and Contingencies for further information on our operating lease obligations. See NOTE H – LOANS PAYABLE, Note 9 – Litigation Financing and Note 11 – Emergency Injury Disaster Loan for further detail regarding the repayment and maturity on the December 31, 2021 debt balances totaling $18,472,997.

NOTE I – ACCRUED EXPENSES

Accrued expenses consist of the following:

	2021	2020
Compensation and incentives	$ 1,655,761	$ 1,136,754
Professional services	1,475,522	243,995
Deposit	450,000	450,000
Interest	21,875,753	18,002,386
Accrued insurance obligations	621,770	355,814
Other operating	1,765,301	985,056
Total accrued expenses	$27,844,107	$21,174,005

Professional fees are mainly attributable to legal fees and other professional services in support of operations and the NAFTA litigation. Compensation and incentives at December 31, 2021 includes $0.9 million accrued incentive awards for the company employees at December 31, 2020 and prior and $0.7 million additional for 2021. Payment of the incentives is subject to Board approval. Other operating at December 31, 2021 contains general expense items resulting from general operations. The primary expense in Other operating is $1.8 million for exploration permits. Accrued interest is due to several lenders per debt agreements described in NOTE H. During the quarter ended September 30, 2019, we received an earnest money deposit of $450,000 from a company controlled by Greg Stemm, our past Chairman of the Board (see NOTE J for further information). The earnest money deposit relates to a draft agreement related to potential sale of a stake of our equity in CIC. This transaction has not yet been consummated. Accrued insurance obligations for the years ended December 31, 2021 and 2020 primarily consisted of directors and officers insurance obligations.

NOTE J – RELATED PARTY TRANSACTIONS

We currently provide services to a deep-sea mineral exploration company, CIC, which was organized and is majority owned and controlled by Greg Stemm, Odyssey's past Chairman of the Board. Mr. Stemm's involvement with this company was disclosed to, and approved by, the Odyssey Board of Directors and legal counsel pursuant to the terms of Mr. Stemm's consulting agreement in effect at that time. We are providing these services pursuant to a Master Services Agreement that provides for back-office services in exchange for a recurring monthly fee as well as other deep-sea mineral related services on a cost-plus profit basis and will be compensated for these services with a combination of cash and equity in CIC. For 2021, we invoiced CIC a total of $921,238, which was for technical and support services. We have the option to accept equity in payment of the amounts due from CIC. See NOTE C for related accounts receivable at December 31, 2021 and 2020 and NOTE G for our investment in an unconsolidated entity.

The above terms and amounts are not necessarily indicative of the terms and amounts that would have been incurred had comparable transactions been entered into with independent parties.

On July 15, 2021, MINOSA assigned $404,633 of its indebtedness with accumulated accrued interest of $159,082 to a director of the Company under the same terms as the original agreement, and that indebtedness continues to be convertible at a conversion price of $4.35. This transaction was reviewed and approved by the independent members of the Company's board of directors, see NOTE H – LOANS PAYABLE (Note 6 – MINOSA 2) for detail.

NOTE K – DEFERRED INCOME AND REVENUE PARTICIPATION RIGHTS

The Company's participating revenue rights and deferred revenue consisted of the following for the respective year end:

	December 31, 2021	December 31, 2020
"*Seattle*" project	$ —	62,500
Galt Resources, LLC (HMS *Victory*)	—	3,756,250
Total revenue participation rights	$ —	$ 3,818,750

"*Seattle*" project

In a private placement that closed in September 2000, we sold "units" consisting of "*Republic"* Revenue Participation Certificates and Common Stock. Each $50,000 "unit" entitled the holder to 1% of the gross revenue generated by the now named "*Seattle*" project (formerly referred to as the "*Republic*" project), and 100,000 shares of Common Stock. Gross revenue is defined as all cash proceeds payable to us as a result of the "*Seattle*" project, excluding funds received by us to finance the project.

The participation rights balance was to be amortized under the units of revenue method once management was able to reasonably estimate potential revenue for this project. The RPCs for the "*Seattle"* project do not have a termination date; therefore, these liabilities were to be carried on the books until revenue is recognized from the project or we permanently abandon the project, which was confirmed by management in June 2021. Therefore, the amount was written off and is included in Other income (expense) in our Consolidated Statements of Operations.

Galt Resources, LLC

In February 2011, we entered into a project syndication deal with Galt Resources LLC ("Galt") for which they invested $7,512,500 representing rights to future revenues of any one project Galt selected prior to December 31, 2011. If the project is successful and generates sufficient proceeds, Galt will recoup their investment plus three times the investment. Galt's investment return will be paid out of project proceeds. Galt will receive 50% of project proceeds until this amount is recouped. Thereafter, they will share in additional net proceeds of the project at the rate of 1% for every million invested. Subsequent to the original syndication deal, we reached an agreement permitting Galt to bifurcate their selection between two projects, the SS *Gairsoppa* and HMS *Victory* with the residual 1% on additional net proceeds assigned to the HMS *Victory* project only. The bifurcation resulted in $3,756,250 being allocated to each of the two projects. Therefore, Galt was entitled to receive 7.5125% of net proceeds from the HMS *Victory* project after they recoup their investment of $3,756,250 plus three times the investment. Galt has been paid in full for their share of the *Gairsoppa* project investment. There are no future payments remaining due to Galt for the *Gairsoppa* project. Based on the timing of the proceeds earmarked for Galt, the relative corresponding amount of Galt's revenue participation right of $3,756,250 was amortized into revenue in 2012 based upon the percent of Galt-related proceeds from the sale of silver as a percentage of total proceeds that Galt earned under the revenue participation agreement ($15.0 million). There was no expiration date on the Galt deal for the HMS *Victory* project. If the archaeological excavation of the shipwreck is performed and insufficient proceeds obtained, then the deferred income balance would be recognized as other income. If the archaeological excavation of the shipwreck was performed and sufficient proceeds obtained, then the deferred income balance would be recognized as revenue. This project syndication agreement was mutually terminated in June 2021. Therefore, the carrying amount was written off to Other income (expense) in our Consolidated Statements of Operations.

NOTE L – STOCKHOLDERS' EQUITY/(DEFICIT)

Common Stock

On August 21, 2020, we sold an aggregate of 2,553,314 shares of our common stock and warrants to purchase up to 1,901,985 shares of our common stock. The net proceeds received from sale, after offering expenses of $0.3 million, of which $0.2 million were withheld to cover fees, were $11.2 million. The shares of common stock and warrants were sold in units, with each unit consisting of one share of common stock and a warrant to purchase up to 0.6 shares of common stock. The purchase price for each unit was $4.543. The warrants have an exercise price of $4.75 per share of common stock and are exercisable at any time during the three-year period commencing six months after issuance.

Warrants

In conjunction with the Note and Warrant Purchase Agreement related to Note 8 – Promissory note 2018 in NOTE H, we originally issued warrants to purchase an aggregate of 65,625 shares of common stock in connection with the notes that were issued. These warrants had an expiration date of July 21, 2021, an exercise price of $12.00, and were exercisable to purchase 65,625 shares of our common stock. On July 8, 2019 we entered into a Second Amendment to Note and Warrant Purchase Agreement and Warrant Modification Agreement. As a result, the lenders now hold warrants to purchase an aggregate of 196,135 shares of our common stock at an exercise price of $5.756 per share. These warrants are exercisable at any time until July 12, 2024. On August 14, 2020, this loan was modified and extended to July 12, 2021. In conjunction with the extension, the lenders received warrants to purchase an aggregate of 131,996 shares of our common stock at $4.67 per share. These warrants expire on August 14, 2023.

Included in the Restated Agreement as described in NOTE H, Note 9 – Litigation financing, during 2019, we issued a warrant allowing the lender to purchase up to 551,378 shares of our common stock at $3.99. The warrant is contingently exercisable and will become exercisable on the date on which we cease the Subject Claim for any reason other than (i) a full and final arbitral award against the Claimholder or (ii) a full and final monetary settlement of the claims or the date on which Proceeds are deposited into the Escrow Account. The warrant has a five-year life that commences on the date it becomes exercisable.

In conjunction with our sale of shares common stock and warrants on August 21, 2020 as described above, we issued warrants to purchase up to 1,901,985 shares of our common stock. The warrants have an exercise price of $4.75 per share and are exercisable at any time during the three-year period commencing six months after the August 21, 2020 sale of our common stock, which is February 21, 2021.

Convertible Preferred Stock

On March 11, 2015, we entered into a Stock Purchase Agreement (the "Purchase Agreement") with Penelope Mining LLC (the "Investor"), and, solely with respect to certain provisions of the Purchase Agreement, Minera del Norte, S.A. de C.V. (the "Lender"). The Purchase Agreement provides for the Company to issue and sell to the Investor shares of the Company's preferred stock in the amounts set forth in the following table (numbers have been adjusted for the February 2016 reverse stock split):

Convertible Preferred Stock	Shares	Price Per Share	Total Investment
Series AA-1	8,427,004	$ 12.00	$101,124,048
Series AA-2	7,223,145	$ 6.00	43,338,870
	15,650,149		$144,462,918

The Investor's option to purchase the Series AA-2 shares is subject to the closing price of the Common Stock on the NASDAQ market having been greater than or equal to $15.12 per share for a period of twenty (20) consecutive business days on which the NASDAQ market is open.

The closing of the sale and issuance of shares of the Company's preferred stock to the Investor is subject to certain conditions, including the Company's receipt of required approvals from the Company's stockholders, the receipt of regulatory approval, performance by the Company of its obligations under the Stock Purchase Agreement, the listing of the underlying common stock on the NASDAQ Stock Market and the Investor's satisfaction, in its sole discretion, with the viability of certain undersea mining projects of the Company. This transaction received stockholders' approval on June 9, 2015. Completion of the transaction requires amending the Company's articles of incorporation to (a) effect a reverse stock split, which was done on February 19, 2016, (b) adjusting the Company's authorized capitalization, which was also done on February 19, 2016, and (c) establishing a classified board of directors (collectively, the "Amendments"). The Amendments have been or will be set forth in certificates of amendment to the Company's articles of incorporation filed or to be filed with the Nevada Secretary of State.

Series AA Convertible Preferred Stock Designation

The Purchase Agreement provides for the issuance of up to 8,427,004 shares of Series AA-1 Convertible Preferred Stock, par value $0.0001 per share (the "Series AA-1 Preferred") and 7,223,145 shares of Series AA-2 Convertible Preferred Stock, par value $0.0001 per share (the "Series AA-2 Preferred"), subject to stockholder approval which was received on June 9, 2015 and satisfaction of other conditions. Significant terms and conditions of the Series AA Preferred are as follows:

Dividends. If and when the Company declares a dividend and any other distribution (including, without limitation, in cash, in capital stock (which shall include, without limitation, any options, warrants or other rights to acquire capital stock) of the Company, then the holders of each share of Series AA Preferred Stock are entitled to receive, a dividend or distribution in an amount equal to the amount of dividend or distribution received by the holders of common stock for which such share of Series AA Preferred Stock is convertible.

Liquidation Preference. The Liquidation Preference on each share of Series AA Preferred Stock is its Stated Value plus accretion at the rate of 8% per annum compounded on each December 31 from the date of issue of such share until the date such share is converted. For any accretion period which is less than a full year, the Liquidation Preference shall accrete in an amount to be computed on the basis of a 360-day year of twelve 30-day months and the actual number of days elapsed.

Voting Rights. The holders of Series AA Preferred will be entitled to one vote for each share of common stock into which the Series AA Preferred is convertible and will be entitled to notice of meetings of stockholders.

Conversion Rights. At any time after the Preferred Shares have been issued, any holder of shares of Series AA Preferred may convert any or all of the shares of preferred stock into one fully paid and non-assessable share of Common Stock.

Adjustments to Conversion Rights. If Odyssey pays a dividend or makes a distribution on its common stock in shares of common stock, subdivides its outstanding common stock into a greater number of shares, or combines its outstanding common stock into a smaller number of shares, or if there is a reorganization, or a merger or consolidation of Odyssey with or into any other entity which results in a conversion, exchange, or cancellation of the common stock, or a sale of all or substantially all of Odyssey's assets, then the conversion rights described above will be adjusted appropriately so that each holder of Series AA Preferred will receive the securities or other consideration the holder would have received if the holder's Series AA Preferred had been converted before the happening of the event. The conversion price in effect from time to time is also subject to downward adjustment if we issue or sell shares of common stock for a purchase price less than the conversion price or if we issue or sell shares convertible into or exercisable for shares of common stock with a conversion price or exercise price less than the conversion price for the Series AA Preferred.

Accounting considerations

As stated above the issuance of the Series AA Convertible Preferred Stock is based on certain contingencies. No accounting treatment determination is required until these contingencies are met and the Series AA Convertible Preferred Stock has been issued. However, we have analyzed the instrument to determine the proper accounting treatment that will be necessary once the instruments have been issued.

ASC 480 generally requires liability classification for financial instruments that are certain to be redeemed, represent obligations to purchase shares of stock or represent obligations to issue a variable number of common shares. We concluded that the Series AA Preferred was not within the scope of ASC 480 because none of the three conditions for liability classification was present.

ASC 815 generally requires the analysis of embedded terms and features that have characteristics of derivatives to be evaluated for bifurcation and separate accounting in instances where their economic risks and characteristics are not clearly and closely related to the risks of the host contract. However, in order to perform this analysis, we were first required to evaluate the economic risks and characteristics of the Series AA Convertible Preferred Stock in its entirety as being either akin to equity or akin to debt. Our evaluation concluded that the Series AA Convertible Preferred Stock was more akin to an equity-like contract largely due to the fact that most of its features were participatory in nature. As a result, we concluded that the embedded conversion feature is clearly and closely related to the host equity contract and will not require bifurcation and liability classification.

The option to purchase the Series AA-2 Convertible Preferred Stock was analyzed as a freestanding financial instrument and has terms and features of derivative financial instruments. However, in analyzing this instrument under applicable guidance it was determined that it is both (i) indexed to the Company's stock and (ii) meet the conditions for equity classification.

Stock-Based Compensation

We have three stock incentive plans. The first is the 2005 Stock Incentive Plan that expired in August 2015. After the expiration of this plan, equity instruments cannot be granted but this plan will continue in effect until all outstanding awards have been exercised in full or are no longer exercisable and all equity instruments have vested or been forfeited.

On June 9, 2015, our stockholders approved our 2015 Stock Incentive Plan (the "Plan") that was adopted by our Board of Directors (the "Board") on January 2, 2015, which is the effective date. The plan expires on the tenth anniversary of the effective date. The Plan provides for the grant of incentive stock options, non-qualified stock options, restricted stock awards, restricted stock units and stock appreciation rights. This plan was initially capitalized with 450,000 shares that may be granted. The Plan is intended to comply with Section 162(m) of the Internal Revenue Code, which stipulates that the maximum aggregate number of Shares with respect to one or more Awards that may be granted to any one person during any calendar year shall be 83,333, and the maximum aggregate amount of cash that may be paid in cash to any person during any calendar year with respect to one or more Awards payable in cash shall be $2,000,000. The original maximum number of shares that were to be used for Incentive Stock Options ("ISO") under the Plan was 450,000. During our June 2016 stockholders meeting, the stockholders approved the addition of 200,000 incremental shares to the Plan. With respect to each grant of an ISO to a participant who is not a ten percent stockholder, the exercise price shall not be less than the fair market value of a share on the date the ISO is granted. With respect to each grant of an ISO to a participant who is a ten percent stockholder, the exercise price shall not be less than one hundred ten percent (110%) of the fair market value of a share on the date the ISO is granted. If an award is a non-qualified stock option ("NQSO"), the exercise price for each share shall be no less than (1) the minimum price required by applicable state law, or (2) the fair market value of a share on the date the NQSO is granted, whichever price is greatest. Any award intended to meet the performance based exception must be granted with an exercise price not less than the fair market value of a share determined as of the date of such grant.

On March 26, 2019, our Board of Directors adopted and approved the 2019 Stock Incentive Plan (the "2019 Plan"), which was approved by our stockholders on June 3, 2019. The 2019 Plan expires on June 3, 2029. The 2019 Plan provides for the grant of incentive stock options, non-qualified stock options, restricted stock awards, restricted stock units and stock appreciation rights. The 2019 Plan is capitalized with 800,000 shares that may be granted. No awards were made from the Plan prior to the effective date. The 2019 Plan includes the following features: no "evergreen" share reserve, prohibits liberal share recycling, no repricing permitted without stockholder approval, no stock option reload features, no transfers of awards for value and dividends and dividends equivalent shall accrue and be paid only if and to the extent the common stock underlying the award become vested or payable.

Share-based compensation expense recognized during the period is based on the value of the portion of share-based payment awards that is ultimately expected to vest. As share-based compensation expense recognized in the statement of operations is based on awards ultimately expected to vest, it can be reduced for estimated forfeitures. The ASC topic Stock Compensation requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The share-based compensation charged against income for the periods ended December 31, 2021, 2020 and 2019 was $1,330,078, $471,121 and $756,599, respectively. The 2019 amount includes $675,000 of equity-based compensation issued from a subsidiary for director fees.

We did not grant stock options to employees or outside directors in 2021, 2020 or 2019. If options were granted, their values would be determined using the Black-Scholes-Merton option-pricing model, which values options based on the stock price at the grant date, the expected life of the option, the estimated volatility of the stock, the expected dividend payments, and the risk-free interest rate over the life of the option.

The Black-Scholes-Merton option pricing model was developed for estimating the fair value of traded options that have no vesting restrictions and are fully transferable. Because option valuation models require the use of subjective assumptions, changes in these assumptions can materially affect the fair value of the options. Our options do not have the characteristics of traded options; therefore, the option valuation models do not necessarily provide a reliable measure of the fair value of our options.

Additional information with respect to both plans stock option activity is as follows:

	Number of Shares	Weighted Average Exercise Price
Outstanding at December 31, 2018	238,651	$ 15.95
Granted	—	$ —
Exercised	—	$ —
Cancelled	—	$ —
Outstanding at December 31, 2019	238,651	$ 15.95
Granted	—	$ —
Exercised	—	$ —
Cancelled	—	$ —
Outstanding at December 31, 2020	238,651	$ 15.95
Granted	—	$ —
Exercised	—	$ —
Cancelled	—	$ —
Outstanding at December 31, 2021	238,651	$ 15.95
Options exercisable at December 31, 2019	238,651	$ 15.95
Options exercisable at December 31, 2020	238,651	$ 15.95
Options exercisable at December 31, 2021	238,651	$ 15.95

The aggregate intrinsic values of options exercisable for the fiscal years ended December 31, 2021, 2020 and 2019 were $55,392, $98,129 and $15,564, respectively. The aggregate intrinsic values of options outstanding for the fiscal years ended December 31, 2021, 2020 and 2019 were $55,392, $98,129 and $15,564, respectively. The aggregate intrinsic values of options exercised during the fiscal years ended December 31, 2021, 2020 and 2019 are $0, $0 and $0, respectively, determined as of the date of the option exercise. Aggregate intrinsic value represents the positive difference between our closing stock price at the end of a respective period and the exercise price multiplied by the number of relative options. The total fair value of options vested during the fiscal years ended December 31, 2021, 2020 and 2019 was $0, $0 and $0, respectively.

As of December 31, 2021, there was no remaining amount of unrecognized compensation cost related to unvested share-based compensation awards granted to employees related to granted stock options.

The following table summarizes information about stock options outstanding at December 31, 2021:

Stock Options Outstanding

Range of Exercise Prices	Number of Shares Outstanding	Weighted Average Remaining Contractual Life in Years	Weighted Average Exercise Price
$26.40 - $26.40	75,158	2.00	$ 26.40
$12.48 - $12.84	141,000	3.00	$ 12.48
$2.02 - $3.59	22,493	4.65	$ 2.74
	238,651	2.84	$ 15.95

The estimated fair value of each restricted stock award is calculated using the share price at the date of the grant. A summary of the status of the restricted stock awards as of December 31, 2021 and changes during the year ended December 31, 2021 is presented as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested at December 31, 2020	249,391	$ 5.18
Granted	254,559	$ 7.05
Vested	(227,241)	$ 5.62
Cancelled	—	$ —
Unvested at December 31, 2021	276,709	$ 6.54

The fair value of restricted stock units vested during the years ended December 31, 2021, 2020 and 2019 was $1,213,525, $653,653 and $0, respectively. The fair value of unvested restricted stock units remaining at the periods ended December 31, 2021, 2020 and 2019 is $1,438,887, $1,770,676 and $132,917, respectively. The weighted-average grant date fair value of restricted stock units granted during the periods ended December 31, 2021, 2020 and 2019 were $7.05, $4.0 and $0, respectively. The weighted-average remaining contractual term of these restricted stock units at the periods ended December 31, 2021, 2020 and 2019 are 1.1, 2.0 and 0.8 years, respectively. As of December 31, 2021, there was a total of $1,349,419 unrecognized compensation cost related to unvested restricted stock awards.

The following table summarizes our common stock warrants outstanding at December 31, 2021:

Common Stock Warrants	Exercise Price	Termination Date
196,135	$ 5.76	07/08/2024
700,000	$ 7.16	11/02/2023
551,378	$ 3.99	**
131,816	$ 4.67	08/14/2023
1,901,985	$ 4.75	02/25/2024
3,481,314		

** A five-year term commences upon the earliest occurrence of either Trigger Date A or Trigger Date B. Trigger Date A is the date on which the Claimholder ceases the Subject Claim for any reason other than (i) a full and final arbitral award against the Claimholder or (ii) a full and final monetary settlement of the claim, see NOTE H – Note 9 – Litigation financing.

Cuota Appreciation Rights

On August 4, 2017, the Company's board of directors (the "Board") adopted the Odyssey Marine Exploration, Inc. Key Employee Cuota Appreciation Rights (the "Key Employee Plan") and the Odyssey Marine Exploration, Inc. Nonemployee Director Cuota Appreciation Rights (the "Director Plan" and, together with the Key Employee Plan, the "Cuota Plans"). The Cuota Plans provide for the award of cuota appreciation rights ("CARs") to eligible participants. A "cuota" is a unit of equity interest under Panamanian law, and the value of the CARs will be determined based upon the appreciation, if any, in the value of the cuotas of Oceanica Resources, S. de R.L., a Panamanian sociedad de responsabilidad limitada ("Oceanica"), after the award of such CARs. The Company indirectly holds a majority stake in Oceanica.

The Board authorized the award of up to 750,000 CARs under the Key Employee Plan and the award of up to 600,000 CARs under the Director Plan. The terms of any CARs awarded under the Cuota Plans will be set forth in an award agreement between the Company and each participant, and the award agreement will set forth a vesting schedule for the CARs. In general, unvested CARs will be forfeited upon a participant's separation of service from the Company, and all vested and unvested CARs will be forfeited upon a participant's separation of service from the Company for "cause" (as defined in the Cuota Plans).

Each participant in the Cuota Plans will be entitled to be paid the value of such participant's CARs upon the occurrence of a "payment event." As used in the Cuota Plans, payment events consist of a change in control of the Company or the date specified in the applicable award agreement and, in the case of the Key Employee Plan, a separation of service without cause and the participant's continuous employment with the Company until the date specified in the applicable award agreement. The value of CARs liability will be based upon the difference between the basis in the cuotas of Oceanica on the date of the award of the CARs, which is $3.00, and the fair value of the cuotas on the date used for the payment event, in each case as determined by the Board in accordance with the provisions of the Cuota Plans. The fair value of the cuota as of August 31, 2019 was $1.00. There is no active market for Oceanica's securities, and there was no activity that would have materially changed the valuation at December 31, 2021.

At December 31, 2021, there was no liability or associated compensation cost associated with these CARs. At December 31, 2021, there were 385,580 vested CARs outstanding and there were no excercisable CARs outstanding related to the Key Employee Plan. The CARs in the Nonemployee Director Plan are utilized as compensation for services, therefore these CARs vest upon grant. At December 31, 2021, the Nonemployee Director Plan had 292,663 CARs vested and outstanding.

NOTE M – INCOME TAXES

As of December 31, 2021, the Company had consolidated income tax net operating loss ("NOL") carryforwards for federal tax purposes of approximately $208,889,722 and net operating loss carryforwards for foreign income tax purposes of approximately $74,888,328. The federal NOL carryforwards from 2005 and forward will expire in various years beginning 2025 and ending through the year 2035. From 2025 through 2027, approximately $47 million of the NOL will expire, and from 2028 through 2037, approximately $128 million of the NOL will expire. The NOL generated in 2018 through 2021 of approximately $34M will be carried forward indefinitely.

The components of the provision for income tax (benefits) are attributable to continuing operations as follows:

	December 31, 2021	December 31, 2020	December 31, 2019
Current			
Federal	$ —	$ —	$ —
State	—	—	—
	$ —	$ —	$ —
Deferred			
Federal	$ —	$ —	$ —
State	—	—	—
	$ —	$ —	$ —

Deferred income taxes reflect the net tax effects of the temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets and liabilities are as follows:

	December 31, 2021	December 31, 2020
Deferred tax assets:		
Net operating loss and tax credit carryforwards	$ 72,201,754	$ 66,867,637
Capital loss carryforward	5,514	5,683
Accrued expenses	363,149	253,374
Start-up costs	5,664	5,837
Excess of book over tax depreciation	259,667	394,649
Stock option and restricted stock award expense	1,429,488	1,464,210
Debt Extinguishment	58,161	59,934
Less: valuation allowance	(74,138,667)	(68,859,984)
	$ 184,730	$ 191,340
Deferred tax liability:		
Property and equipment basis	$ 10,434	$ 48,545
Prepaid expenses	174,296	142,795
	$ 184,730	$ 191,340
Net deferred tax asset	$ —	$ —

As reflected above, we have recorded a net deferred tax asset of $0 at December 31, 2021. As required by the Accounting for Income Taxes topic in the ASC, we have evaluated whether it is more likely than not that the deferred tax assets will be realized. Based on the available evidence, we have concluded that it is more likely than not that those assets would not be realized without the recovery and rights of ownership or salvage rights of high-value shipwrecks or other forms of taxable income, thus a valuation allowance has been recorded as of December 31, 2021.

The change in the valuation allowance is as follows:

December 31, 2021	$74,138,667
December 31, 2020	68,859,984
Change in valuation allowance	$ 5,278,683

The federal and state income tax provision (benefit) is summarized as follows for the years ended:

	December 31, 2021	December 31, 2020	December 31, 2019
Expected (benefit)	$ (3,386,834)	$ (4,429,419)	$ (3,254,942)
Effects of:			
State income taxes net of federal benefits	(570,116)	(940,302)	(156,858)
Nondeductible expense	(56,839)	150,238	262,776
Subpart F Income	735,229	345,006	—
Debt Extinguishment	—	91,266	—
Funder Loan Proceeds	—	2,482,252	—
Change in valuation allowance	6,229,371	4,815,784	5,170,161
Foreign Rate Differential	(2,950,811)	(2,514,825)	(2,021,137)
	$ —	$ —	$ —

The Company's effective income tax rate is lower than what would be expected if the federal statutory rate were applied to income before income taxes primarily because of certain expenses deductible for financial reporting purposes that are not deductible for tax purposes, research and development tax credits, operating loss carryforwards, and adjustments to previously-recorded deferred tax assets and liabilities due to the enactment of the Tax Cuts and Jobs Act.

We have not recognized a material adjustment in the liability for unrecognized tax benefits and have not recorded any provisions for accrued interest and penalties related to uncertain tax positions.

The earliest tax year still subject to examination by a major taxing jurisdiction is 2017.

NOTE N – MAJOR CUSTOMERS

For the fiscal year ended December 31, 2021, we had one customer, CIC, which is a related party (See NOTE J), that accounted for 100.0% of our total revenue. During the fiscal year ended December 31, 2020, we had two customers, one of which was CIC, that accounted for 71.0% of our total revenue.

NOTE O – COMMITMENTS AND CONTINGENCIES

Rights to Future Revenues, If Any

We previously sold the rights to share in future revenues, if any, with respect to the "*Seattle*" project and previously recorded $62,500 as Deferred Income from Revenue Participation Rights (See NOTE K). We were contingently liable to share the future revenue of this project only if revenue is derived from this specific project but, during 2021 management permanently abandoned this project.

In February 2011, we entered into a project syndication deal with Galt Resources LLC ("Galt") for which they invested $7,512,500 representing rights to future revenues of any project of Galt's choosing. This amount was previously bifurcated equally between the SS *Gairsoppa* and HMS *Victory* projects. The SS *Gairsoppa* has been paid in full. This project syndication agreement was mutually terminated in June 2021. See NOTE K for further detail.

Legal Proceedings

The Company may be subject to a variety of claims and suits that arise from time to time in the ordinary course of business. We are not a party to any litigation as a defendant where a loss contingency is required to be reflected in our consolidated financial statements.

Contingency

During March 2016, our Board of Directors approved the grant and issuance of 3.0 million new equity shares of Oceanica Resources, S.R.L. ("Oceanica") to two attorneys for their future services. This equity would only be issuable upon the Mexican's government approval and issuance of the Environmental Impact Assessment ("EIA") for our Mexican subsidiary. All possible grants of new equity shares were approved by the Administrators of Oceanica. We also owe consultants contingent success fees of up to $700,000 upon the approval and issuance of the EIA. The EIA has not been approved as of the date of this report.

Going Concern Consideration

We have experienced several years of net losses and may continue to do so. Our ability to generate net income or positive cash flows for the following twelve months is dependent upon financings, our success in developing and monetizing our interests in mineral exploration entities, generating income from exploration charters, collecting on amounts owed to us, or completing the MINOSA/Penelope equity financing transaction approved by our stockholders on June 9, 2015.

Our 2021 business plan requires us to generate new cash inflows to effectively allow us to perform our planned projects. We continually plan to generate new cash inflows through the monetization of our receivables and equity stakes in seabed mineral companies, financings, syndications or other partnership opportunities. If cash inflow ever becomes insufficient to meet our desired projected business plan requirements, we would be required to follow a contingency business plan that is based on curtailed expenses and fewer cash requirements. On August 21, 2020, we sold an aggregate of 2,553,314 shares of our common stock and warrants to purchase up to 1,901,985 shares of our common stock. The net proceeds received from this sale, after offering expenses of $0.3 million, were $11.2 million (See NOTE L). These proceeds, coupled with other anticipated cash inflows, provided operating funds through early 2022.

On March 11, 2015, we entered into a Stock Purchase Agreement with Minera del Norte S.A. de c.v. ("MINOSA") and Penelope Mining LLC ("Penelope"), an affiliate of MINOSA, pursuant to which (a) MINOSA agreed to extend short-term, debt financing to Odyssey of up to $14.75 million, and (b) Penelope agreed to invest up to $101 million over three years in convertible preferred stock of Odyssey. The equity financing is subject to the satisfaction of certain conditions, including the approval of our stockholders which occurred on June 9, 2015, and MINOSA and Penelope are currently under no obligation to make the preferred share equity investments.

Our consolidated non-restricted cash balance at December, 2021 was $2.3 million. We have a working capital deficit at December 31, 2021 of $49.3 million. In the fourth quarter of 2021, we executed a Termination and Settlement Agreement with Monaco and SMOM that removed approximately $14.5 million of indebtedness from our balance sheet (see NOTE H). Our largest loan of $14.75 million from MINOSA had a due date of December 31, 2017 which is now linked to other stipulations, see NOTE H for further detail. The majority of our remaining assets have been pledged to MINOSA, leaving us with few opportunities to raise additional funds from our balance sheet. The total consolidated book value of our assets was approximately $8.9 million at December 31, 2021, which includes cash of $2.3 million. The fair market value of these assets may differ from their net carrying book value. Even though we executed the above noted financing arrangement with Penelope, Penelope must purchase the shares for us to be able to complete the equity component of the transaction. The Penelope equity transaction is heavily dependent on the outcome of our subsidiary's application approval process for an environmental permit (EIA), as well as the current NAFTA litigation, to commercially develop a mineralized phosphate deposit off the coast of Mexico. The factors noted above raise doubt about our ability to continue as a going concern. These consolidated financial statements do not include any adjustments to the amounts and classification of assets and liabilities that may be necessary should we be unable to continue as a going concern.

Lease commitment

In August 2019, we entered into an operating lease for our corporate office space under a non-cancellable lease through August 2024 with monthly payments ranging from $11,789 to $13,269, not including sales tax. The lease provides for annual increases of base rent of 3% until the expiration date. Pursuant to ASC 842, an operating lease right of usage (ROU) asset and liability were recognized in the amount of $590,612 at inception of the lease based on the present value of lease payments over the remaining lease term. The ROU asset represents the Company's right to use the underlying office space asset for the lease term, and the lease liability represents the Company's obligation to make lease payments arising from the lease. Since the implicit rate of interest in the arrangement was not readily determinable, we utilized our incremental borrowing rate of 10% in determining the present value of lease payments. The operating lease ROU asset includes any lease payments made and excludes lease incentives.

At December 31, 2021, the ROU asset and lease obligation were, $338,577 and $351,881, respectively.

The remaining lease payment obligations are as follows:

Year ending December 31,	Annual payment obligation
2022	151,965
2023	156,524
2024	92,884
	$ 401,373

During the third quarter of 2019, we entered into a five-year lease at the location of our corporate office space in Tampa, Florida to support our marine operations. The lease was effective October 1, 2019 and has monthly lease payments ranging from $4,040 to $4,547, not including sales tax, over the five-year term. We are accounting for this lease under ASC 842 which resulted in a right of use asset and lease obligation of $202,424. The discount used in determining the right of use asset was 10%.

At December 31, 2021, the ROU asset and lease obligation were, $122,532 and $127,085, respectively.

The remaining lease payment obligations are as follows:

Year ending December 31,	Annual payment obligation
2022	51,827
2023	53,382
2024	40,930
	$ 146,139

We have recognized approximately $216,000 and $194,000 in rent expense associated with these leases for the years ended December 31, 2021 and 2020, respectively.

NOTE P – QUARTERLY FINANCIAL DATA – UNAUDITED

The following tables present certain unaudited consolidated quarterly financial information for each of the past eight quarters ended December 31, 2021 and 2021. This quarterly information has been prepared on the same basis as the Consolidated Financial Statements and includes all adjustments necessary to state fairly the information for the periods presented.

	Fiscal Year Ended December 31, 2021 Quarter Ending			
	March 31	June 30	September 30	December 31
Revenue - net	$ 291,676	$ 182,334	$ 197,051	$ 250,177
Gross profit	291,676	182,334	197,051	250,177
Net income (loss)	(3,720,218)	(2,227,499)	(4,085,297)	76,619
Basic and diluted net income per share	$ (0.29)	$ (0.17)	$ (0.31)	$ 0.02

	Fiscal Year Ended December 31, 2020 Quarter Ending			
	March 31	June 30	September 30	December 31
Revenue - net	$ 1,005,511	$ 519,969	$ 211,538	$ 301,314
Gross profit	1,005,511	519,969	211,538	301,314
Net income (loss)	(2,897,976)	(4,098,623)	(5,448,046)	(2,367,511)
Basic and diluted net income per share	$ (0.30)	$ (0.43)	$ (0.51)	$ (0.17)

SCHEDULE II – VALUATION and QUALIFYING ACCOUNTS
For the Fiscal Years of 2019, 2020 and 2021

ODYSSEY MARINE EXPLORATION, INC. AND SUBSIDIARIES

	Balance at Beginning of Year	Charged (Credited) to Expenses	Charged (Credited) to Other Accounts	Deductions	Balance at End of Year
Inventory reserve					
2019	—	—	—	—	—
2020	—	—	—	—	—
2021	—	—	—	—	—
Accounts receivable reserve					
2019	—	—	—	—	—
2020	—	—	—	—	—
2021	—	—	—	—	—

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 thereunder duly authorized.

ODYSSEY MARINE EXPLORATION, INC.

Dated: March 31, 2022 By: /S/ Mark D. Gordon

Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

SIGNATURE	TITLE	DATE
/S/ MARK D. GORDON **Mark D. Gordon**	Chief Executive Officer (Principal Executive Officer) and Chairman of the Board	March 31, 2022
/S/ John D. Longley **John D. Longley**	President and Chief Operating Officer	March 31, 2022
/S/ Christopher E. Jones **Christopher E. Jones**	Chief Financial Officer (Principal Financial Officer)	March 31, 2022
/S/ Jay A. Nudi **Jay A. Nudi**	Chief Accounting Officer (Principal Accounting Officer)	March 31, 2022
/S/ John C. Abbott **John C. Abbott**	Director	March 31, 2022
/S/ James S. Pignatelli **James S. Pignatelli**	Director	March 31, 2022
/S/ JON D. SAWYER **Jon D. Sawyer**	Director	March 31, 2022
/S/ Todd E. Siegel **Todd E. Siegel**	Director	March 31, 2022
/S/ Mark B. Justh **Mark B. Justh**	Lead Director	March 31, 2022

EXHIBITS INDEX

Exhibit Number	Description
3.1	Articles of Incorporation, as amended (incorporated by reference to Exhibit 3.1 to the Company's Annual Report on Form 10-KSB for the year ended February 28, 2001)
3.2	Second Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the Company's Report on Form 8-K dated February 28, 2006)
3.3	Certificate of Amendment filed with the Nevada Secretary of State on June 6, 2011 (incorporated by reference to Exhibit 3.1 to the Company's Report on Form 8-K filed June 7, 2011)
3.4	Certificate of Amendment filed with the Nevada Secretary of State on February 18, 2016 (incorporated by reference to Exhibit 3.1 to the Company's Report on Form 8-K filed February 19, 2016)
3.5	Certificate of Change filed with the Nevada Secretary of State on February 18, 2016 (incorporated by reference to Exhibit 3.2 to the Company's Report on Form 8-K filed February 19, 2016)
3.6	Certificate of Withdrawal filed with the Nevada Secretary of State on June 29, 2016 (incorporated by reference to Exhibit 3.1 to the Company's Report on Form 8-K filed July 6, 2016)
3.7	Amendment to Second Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the Company's Report on Form 8-K filed August 15, 2017)
4.1	Form of Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.1 to the Company's Report on Form 8-K filed November 2, 2018)
4.2	Form of Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.2 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019)
4.3	Form of Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.1 to the Company's Report on Form 8-K filed August 25, 2020)
10.1*	2005 Equity Incentive Plan (incorporated by reference to Exhibit 10.14 to the Company's Report on Form 8-K dated August 3, 2005)
10.2*	Employment Agreement dated August 7, 2014, between the Company and Mark D. Gordon (incorporated by reference to Exhibit 10.36 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014)
10.3*	2015 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K dated January 2, 2015)
10.4	Stock Purchase Agreement dated March 11, 2015 (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K dated March 13, 2015)
10.5	Promissory Note dated March 11, 2015 (incorporated by reference to Exhibit 10.2 to the Company's Report on Form 8-K dated March 13, 2015)
10.6	Pledge Agreement dated March 11, 2015 (incorporated by reference to Exhibit 10.3 to the Company's Report on Form 8-K dated March 13, 2015)
10.7	Amendment No. 1 to Stock Purchase Agreement dated April 10, 2015 (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K dated April 15, 2015)
10.8	Amendment No. 1 to Promissory Note dated April 10, 2015 (incorporated by reference to Exhibit 10.2 to the Company's Report on Form 8-K dated April 15, 2015)
10.9	Amendment No. 1 to Pledge Agreement dated April 10, 2015 (incorporated by reference to Exhibit 10.3 to the Company's Report on Form 8-K dated April 15, 2015)
10.10	Amendment No. 2 to Promissory Note dated October 1, 2015 (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K dated October 5, 2015)
10.11	Convertible Promissory Note dated March 18, 2016 (incorporated by reference to Exhibit 10.2 to the Company's Report on Form 8-K dated March 18, 2016)
10.12	Loan and Security Agreement dated April 15, 2016 (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K dated April 21, 2016)
10.13	Convertible Promissory Note dated April 15, 2016 (incorporated by reference to Exhibit 10.2 to the Company's Report on Form 8-K dated April 21, 2016)
10.14	Note Purchase Agreement dated August 10, 2017 (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K filed August 15, 2017)

10.15	Convertible Promissory Note dated August 10, 2017 (incorporated by reference to Exhibit 10.2 to the Company's Report on Form 8-K filed August 15, 2017)
10.16	Second Amended and Restated Convertible Promissory Note dated August 10, 2017 (incorporated by reference to Exhibit 10.3 to the Company's Report on Form 8-K filed August 15, 2017)
10.17	Second Amended and Restated Waiver and Consent and Amendment No. 5 to Promissory Note and Amendment No. 2 to Stock Purchase Agreement dated August 10, 2017 (incorporated by reference to Exhibit 10.4 to the Company's Report on Form 8-K filed August 15, 2017)
10.18	Share Purchase Agreement dated April 9, 2019 (incorporated by reference to Exhibit 10.1 to the Company's Amendment No. 1 to Quarterly Report on Form 10-Q/A filed July 26, 2019)
10.19	Second Amended and Restated International Claims Enforcement Agreement (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K filed April 22, 2020)
10.20	Second Amendment to Note and Warrant Purchase Agreement and Note and Warrant Modification Agreement (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed August 9, 2019)
10.21	Note and Loan Agreement dated April 16, 2020 between Odyssey Marine Exploration, Inc. and Fifth Third Bancorp (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K filed April 22, 2020)
10.22	Loan Authorization, Note and Security Agreement dated May 16, 2020 and executed on June 26, 2020 between Odyssey Marine Exploration, Inc. and the U.S. Small Business Administration (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K filed June 30, 2020)
10.23	Third Amendment to Note and Warrant Purchase Agreement and Note and Warrant Modification Agreement dated August 14, 2020 among Odyssey Marine Exploration, Inc. and the Lenders (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K filed August 20, 2020)
10.24	Form of Warrant to Purchase Common Stock issued by Odyssey Marine Exploration, Inc. (incorporated by reference to Exhibit 10.2 to the Company's Report on Form 8-K filed August 20, 2020)
10.25	Form of Warrant to Purchase Common Stock issued by Odyssey Marine Exploration, Inc. (incorporated by reference to Exhibit 10.2 to the Company's Report on Form 8-K filed August 20, 2020)
10.26	Form of Purchase Agreement (incorporated by reference to Exhibit 4.1 to the Company's Report on Form 8-K filed August 25, 2020)
10.27	Third Amended and Restated International Claims Enforcement Agreement (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K filed June 17, 2021)
10.28	Termination and Settlement Agreement (incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K filed October 5, 2021)
21.1	Subsidiaries of the Registrant (filed herewith electronically)
23.1	Consent of Warren Averett LLC, Independent Accountants (filed herewith electronically)
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith electronically)
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith electronically)
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350 (filed herewith electronically)
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350 (filed herewith electronically)
96.1	Technical Report, Revised Assessment of the Don Diego West Phosphorite Deposit, Mexican Exclusive Economic Zone (EEZ) prepared for Odyssey Marine Exploration, Inc and issued effective as of June 30, 2014 by Henry J. Lamb, P.G. (filed herewith electronically).
101.1	Inline XBRL Interactive Data File
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained within Exhibit 101)

* Management contract or compensatory plan.

Exhibit 21.1

Subsidiaries of the Registrant

Subsidiary (1)	Jurisdiction of Incorporation or Organization
Odyssey Marine Services, Inc.	Nevada
OVH, Inc.	Nevada
Odyssey Retriever, Inc.	Nevada
Marine Exploration Holding, Llc	Nevada
Odyssey Marine Entertainment, Inc.	Nevada
Odyssey Marine Minerals, Llc	Nevada
Odyssey Marine Management, Ltd.	Bahamas
Oceania Marine Operations S.R.L.	Panama
Odyssey Marine Enterprises, Ltd.	Bahamas
Oceanica Resources, S. de. R.L. (2)	Panama
Exploraciones Oceanicas, S. de R.L. De C.V. (3)	Mexico
Aldama Mining Company, S. De R.L. De C.V.	Mexico
Telemachus Minerals, S. De R.L. De C.V.	Mexico
Lihir Subsea Gold, LLC (4)	Nevada
Bismarck Mining Corporation (PNG) Limited	Papua New Guinea

(1) Except as otherwise indicated, the Registrant directly or indirectly holds all of the outstanding equity interests of each subsidiary.
(2) The Registrant holds an indirect [56.29%] interest in this company.
(3) The Registrant holds an indirect [56.28%] interest in this company.
(4) The Registrant holds a direct [85.64%] interest in this company.

EXHIBIT 23.1

Warren Averett
CPAs AND ADVISORS

400 North Ashley Drive, Suite 700
Tampa, FL 33602
813.229.2321
warrenaverett.com

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement on Form S-3, SEC File No. 333-261592, and Registration Statements on Form S-8, SEC File Nos. 333-232629, 333-213438, 333-205328, 333-168611, 333-134631 and 333-166130 of Odyssey Marine Exploration, Inc. and Subsidiaries, of our report dated March 31, 2022 on the consolidated financial statements of Odyssey Marine Exploration, Inc. and Subsidiaries, in this Annual Report on Form 10-K for the year ended December 31, 2021.

/s/ Warren Averett, LLC

Tampa, Florida
March 31, 2022

EXHIBIT 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Mark D. Gordon, certify that:

1. I have reviewed this annual report on Form 10-K of Odyssey Marine Exploration, Inc.:

2. Based on my knowledge, this 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 period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this 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 report;

4. The registrant's other certifying officer(s) and I are 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 have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant's, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our 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 report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this 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 an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our 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 (or persons performing the equivalent functions):

   (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: March 31, 2022

/S/ Mark D. Gordon

Mark D. Gordon
Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Christopher E. Jones, certify that:

1. I have reviewed this annual report on Form 10-K of Odyssey Marine Exploration, Inc.:

2. Based on my knowledge, this 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 period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this 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 report;

4. The registrant's other certifying officer(s) and I are 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 have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant's, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our 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 report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this 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 an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our 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 (or persons performing the equivalent functions):

   (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: March 31, 2022

/S/ Christopher E. Jones

Christopher E. Jones
Chief Financial Officer (Principal Financial Officer)

EXHIBIT 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
ODYSSEY MARINE EXPLORATION, INC.
PURSUANT TO 18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I hereby certify that, to the best of my knowledge, the annual report on Form 10-K of Odyssey Marine Exploration, Inc. for the period ending December 31, 2021, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material aspects, the financial condition and results of operations of Odyssey Marine Exploration, Inc.

/s/ Mark D. Gordon

Mark D. Gordon
Chief Executive Officer

March 31, 2022

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Odyssey Marine Exploration, Inc. and will be retained by Odyssey Marine Exploration, Inc. and furnished to the Securities and Exchange Commission upon request.

EXHIBIT 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
ODYSSEY MARINE EXPLORATION, INC.
PURSUANT TO 18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I hereby certify that, to the best of my knowledge, the annual report on Form 10-K of Odyssey Marine Exploration, Inc. for the period ending December 31, 2021, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material aspects, the financial condition and results of operations of Odyssey Marine Exploration, Inc.

/S/ Christopher E. Jones

Christopher E. Jones
Chief Financial Officer

March 31, 2022

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Odyssey Marine Exploration, Inc. and will be retained by Odyssey Marine Exploration, Inc. and furnished to the Securities and Exchange Commission upon request.

Exhibit 96.1

Technical Report:
Revised Assessment of the
Don Diego West Phosphorite Deposit,
Mexican Exclusive Economic Zone (EEZ)

Prepared for

Oceanica Resources S. de R.L.
Panama

Effective Date
June 30, 2014

Prepared by:

Henry J. Lamb, P.G.
Mineral Resource Associates
501 North Church Avenue
Mulberry, Florida 33860

(863) 425-4092

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LIST OF TABLES

LIST OF FIGURES

CAUTIONARY NOTE TO US INVESTORS:

The United States Securities and Exchange Commission (the "SEC") limits disclosure for reporting purposes to mineral deposits that a company can economically and legally extract or produce. Certain terms are used in this report, such as "reserves," "resources," "geologic resources," "proven," "probable," "measured," "indicated," or "inferred," which may not be consistent with the reserve definitions established by the SEC.

DISCLAIMER

Mineral Resource Associates (MRA) has prepared this NI 43-101 Technical Report for the Don Diego Phosphate Project. The project location has not been inspected by MRA. MRA has reviewed technical data, reports, and studies produced by others as well as information provided by Oceanica Resources, S. de R.L. and its affiliates. The review was conducted on a reasonableness basis and MRA has noted herein where such provided information engendered questions. Except for the instances in which we have noted questions and after verification, where possible, MRA has relied upon the information provided as being accurate and suitable for use in this report.

MRA assumes no liability for the accuracy of the information provided. We retain the right to change or modify our conclusions if new, or undisclosed information, is provided which might change our opinion.

MRA does not accept any liability other than its statutory liability to any individual, organization, or company and takes no responsibility for any loss or damage arising from the use of this report, or information, data, or assumptions contained therein. With respect to this Technical Report and use thereof by Oceanica Resources, S. de R.L. and its affiliates, each entity agrees to indemnify and hold harmless Mineral Resource Associates, its shareholders, directors, officers, and associates from any and all losses, claims, damages, liabilities or actions to which they or any of them may become subject under any securities act, statute or common law and will reimburse them on a current basis for any legal or other expenses incurred by them in connection with investigating any claims or defending any actions.

ELECTRONIC DISCLAIMER

Electronic mail copies of this report are not official unless authenticated and signed by MRA and are not to be modified in any manner without MRA's expressed written consent.

UNITS OF MEASUREMENT AND CURRENCY

Measurement units used in this report are in the metric system. The currency is United States (US) dollars unless specifically stated otherwise.

GLOSSARY OF TERMS AND ABBREVIATIONS

apatite	A group of variously colored hexagonal minerals consisting of calcium phosphate together with fluorine, chlorine, hydroxyl, or carbonate in various amounts. Also any mineral of the apatite group such as fluorapatite, chloroapatite, hydroxylapatite, carbonate-apatite and francolite.
beneficiation	Ore dressing, a series of unit operations to liberate and then separate ore minerals from gangue minerals. The products of beneficiation are referred to as: Concentrates: enriched in ore minerals Tailings: depleted of ore minerals Slimes: fine particles rejected by washing
bulk density	In situ specific gravity (or specific weight in place, undisturbed) of identified types of rock or burden, including natural moisture
calcite	Common rock-forming mineral: $CaCO_3$.
CAPEX	Capital Expenditures
desalination	The process of removing dissolved salt and other minerals from seawater to create freshwater.
dilution	The excavation in mining of minor amounts of waste material with ore, specifically at the ore/waste contacts, which results in decreasing the quality of ore and increasing the mined quantity from estimations based on geological plans.
dolomite	Widely occurring rock formed from limestone by the replacement of calcium by magnesium as carbonate of calcium and magnesium, $CaMg(CO_3)_2$.
flotation	A process in which a prepared mixture of minerals is conditioned with reagents and subjected to agitation and aeration to cause those minerals rendered hydrophobic to float and the other minerals to sink.
flowsheet	A diagram showing relationships between process units, or process areas, and process streams. May be in the form of a block diagram or a symbol diagram.
fluorapatite	A form of apatite in which fluorine predominates over chlorine.
FOB	Freight on Board
francolite	A variety of carbonate fluorapatite occurring in most commercial phosphate rocks of sedimentary origin. The mineral may have a high degree of anion and cation substitution in the fluorapatite structure.
hardbottom	Exposed areas of rock or consolidated sediments, distinguished from surrounding unconsolidated sediments, which may or may not be characterized by a thin veneer of live or dead biota, generally located in the ocean rather than in the estuarine system.
Hydrocyclone	A classifier used to separate a pulp into coarse/heavier product and a fine/lighter product. The pulp takes a circular path in a cone-shaped device where centrifugal forces act to separate the feed to the device into a coarse fraction that is discharged at the apex of the cone and a finer fraction removed by a vortex finder.
JORC	Internationally accepted code for Reporting of Mineral Resources and Ore Reserves, Australasian Joint Ore Reserves Committee.
M/V Dorado Discovery	The Research Vessel *Dorado Discovery* is the mineral exploration platform used during the Don Diego Phosphorite Project.
OPEX	Operating Expenditure
Ore	Material qualified as ore contains phosphorite in sufficient quantity and quality to be proven economical to mine, within the perspective of the mining plan designed for the entire project scope
Overburden	Sedimentary rock composed predominantly of carbonates, which overlies the phosphorite layers of the resource

GLOSSARY OF TERMS AND ABBREVIATIONS

Phosphate	A compound characterized by a tetrahedral ionic group of phosphorous and oxygen $(PO_4)_3$. Used by industry to loosely indicate the apatite group of minerals (phosphate) or deposits of apatite minerals (phosphate deposits). Used in this study with reference to phosphorite beds (reserves).
Phosphorite	A sedimentary rock composed principally of phosphate minerals. Most commonly, it is a bedded, marine rock composed of microcrystalline carbonate-fluorapatite in the form of laminae, pellets, oolites, nodules, and skeletal and shell fragments. Used in this study to descriptively designate correlatable zones of substantial amounts of phosphate minerals (resources).
Pilot plant	An installed prototype of a process in which each of the processing units are replicated at a reduced scale to permit operation on a semi-continuous basis under a controlled environment where measurements and efficiencies can be observed and measured.
ROI	Return on Investment
Slimes	Fine particulate material that can interfere with flotation due to excessive reagent consumption, excessive frothing, or slimes coatings. Frequently, the fine gangue material is removed from ore by washing and size classification.
Stripping	Removal of overburden to expose ore body.
Stripping ratio	The ratio of waste material to phosphorite material removed in the mine plan. This ratio is expressed on a weight basis in this report (tonnes of waste to one tonne of phosphorite).
Surficial	Of, relating to, or occurring on or near the surface of the earth
Tailings	Waste material removed from sized ore in the beneficiation flotation process.
Waste	Rock within the designed mine plan which contains insufficient economical quantity, or no measured quantity of phosphorite. It is basically sterile rock material, which is required to be removed to access economical phosphorite, designated as ore.

GLOSSARY OF CHEMICAL ABBREVIATIONS

acid insoluble residue	(A.I. and/or A.I.R.) The material remaining after samples have been digested for chemical analysis. This material is essentially inert in the manufacture of phosphoric acid.
Al_2O_3	A commonly used term for expressing aluminum content in phosphate rock ore and products as well as phosphate-based fertilizer products.
CaO	Calcium oxide, lime, or quicklime. Also the analytical format for expressing calcium analysis.
Cd	Cadmium. A heavy metal that may exist as trace quantities (ppm) in phosphate rock.
Fe_2O_3	Ferric oxide or hematite; the analytical format for expressing iron analysis.
MgO	Magnesium oxide or magnesia, the analytical format for expressing magnesium analysis.
P	Phosphorous element
P_2O_5	Phosphorus pentoxide. A term commonly used to denote the phosphorus (P) content or grade, expressed as a percent. Also the analytical format for expressing phosphorus analysis of fertilizers.

GLOSSARY OF MEASUREMENT ABBREVIATIONS

°C	Degree Celsius
ha	A hectare is an unit of surface or land equivalent to 10,000 square meters or 2.471 acres.
k	Kilo, 1,000 (thousand)
kg	Abbreviation for kilograms (1,000 grams), equivalent to 2.205 pounds.
kg/cm2	Gauge pressure
kw	Abbreviation for kilowatt, equivalent to 1.341 horsepower (HP)
kwh	Kilowatt Hour
L	Abbreviation for liter, equivalent to 0.254 US liquid gallons
m	A meter, equivalent to 39.37 inches
m2	Square meter
m3	Cubic meter
m3/h	Cubic meter per hour
micron	A unit of length equal to one millionth of a meter.
mm	Millimeter (0.0001 m)
MW	Megawatt
Mwh	Megawatt Hour
ppm	Parts per million
psu	The Practical Salinity Scale defines salinity in terms of the conductivity ratio of a sample to that of a solution of 32.4356 grams of KCl at 15°C in a 1 kilogram solution. A seawater sample at 15°C with a conductivity equal to this KCl solution has a salinity of exactly 35 practical salinity units (psu).
tonne	A metric tonne, equal to 2,204.62 pounds

1.0 ITEM 3: EXECUTIVE SUMMARY

1.1 LOCATION

The Don Diego Phosphate Project involves those activities associated with the exploration and development of a seafloor sedimentary marine phosphorite located primarily in the Mexican Exclusive Economic Zone (EEZ) offshore Baja California Sur, Mexico in the Pacific Ocean. See Figure 1-1.

Figure 1-1 Location of the Don Diego Phosphate Project

1.2 OWNERSHIP

The Don Diego Mineral Concession was granted to Exploraciones Oceanicas, S. de R.L. de C.V. by the Secretaria de Economia, Coordinacion General de Mineria, Direccion General de Minas on June 28, 2012, and is valid for 50 years. The granting document is entitled, “Titulo de Concesion Minera Numero 240744.”

1.3 GEOLOGY AND MINERALIZATION

The Don Diego Phosphorite Deposit is a marine sedimentary pelletal phosphorite and appears to conform to the classical description for the geologic origin of such deposits. The deposit has been known for about 50 years with the first scientific report being an unpublished PhD Dissertation by D’Anglejan (1965).

D’Anglejan (1967) described the regional deposit as a bedded phosphorite facies found within recent continental shelf sediments off the west coast of Baja California Sur between 24º and 26º N latitude. Conditions appeared to conform to the geological and marine environment for large-scale phosphorite formation including a shallow platform along a trough restricted by submarine banks with local seasonal upwelling marine currents laden with phosphorus. The lithological description is a

carbonate-fluorapatite with opaline silica and reducing fine mud. The phosphorite occurs as black to dark brown, well-sorted, sand to fine sand particles hosted in a fine sand to silt/clay matrix, black to dark greenish black in color. The carbonate content of the fluorapatite pellets was determined to be 1.25% to 1.75% CO_2, comparable to the Permian phosphorites of Wyoming and the fluoride content was assayed at 2.8% F.

D'Anglejan continued and reported types of phosphate particles:

- Black ovoidal structureless pellets; and
- Biogenous particles in the coarser fraction, the majority of which are platy, lamellar and appear to be derived from a phosphatic brachiopod valve (Discinicus cumingli).

The primary weakness of the D'Anglejan reports and subsequent reports referring to his reports is the lack of penetration into the phosphorite bed. During Legs 3 and 4 of its exploration program, the Project team applied a vibracore drilling technique that achieved sampling depth of up to 6 meters, significantly deeper that the maximum 1.2 meters achieved in the 1960s. Additionally, the drilling grid was significantly closer-spaced initially approximating a 5-km grid followed by infill drilling in the primary target area.

As a result of this core drilling activity, the exploration program identified two types of phosphorite deposits. The first type is a shoreward, "plateau" deposit containing a 5% to 15% P_2O_5, gray, sand to silty-sand, loose, unconsolidated, saturated phosphorite composed primarily of quartz sand, black pelletal phosphorite and sea shells (whole and fragments). The second and potentially more economically significant is a seaward, upper continental shelf deposit with a low-angle slope to the west with an enriched phosphorite bed typically containing 15% to 25% P_2O_5, black phosphorite pellets, quartz silt and sand, black to dark greenish black silty clay, saturated, soft to ooze-like, with mollusk shells and shell fragments.

The simple mineralogy of the three major mineral components (phosphorite pellets, quartz and shells) appear to lend the phosphorite ore to a simple, low-cost beneficiation process. Ore characterization tests indicate that the shells and shell fragments are principally coarser than 212 microns (65 Tyler Mesh) with the majority of the shell weight being +853 microns (+20 Tyler Mesh). The quartz sand and silt begins to increase at -212 microns (-65 Tyler Mesh) with the majority of the quartz particles being less than 104 microns (-150 Tyler Mesh). The pelletal phosphorite dominates in the -853 +104 micron size fraction with P_2O_5 grades typically being in the range of 18% to 25% P_2O_5. The shells and shell fragments are more dominate in the uppermost meter and generally become finer and less abundant at depth.

A conceptual, bench-scale flowsheet for sample testing has been prepared with the intent of producing a minimum 30% P_2O_5 phosphate rock concentrate to be used for the manufacturing of phosphoric acid using the wet process methods.

This Technical Report focuses on the stratigraphically thicker and higher ore grade phosphorite deposit located on the upper continental slope and herein referred to as the Don Diego West Phosphorite Deposit (DD West).

1.4 EXPLORATION CONCEPT

The exploration program for the Don Diego Mineral Concession is the most detailed phosphorite production-based exploration program to be executed in the Offshore Baja California Phosphorite District. The exploration concept was to explore the area using known technologies applied to the marine environment to locate a suitable phosphorite deposit capable of sustaining the production of 3.0 to 3.5 million tonnes per year of phosphate rock concentrates with suitable chemical characteristics for the production of phosphoric acid using one of the established wet processes for a period of not less than 20 years.

1.5 EXPLORATION, DEVELOPMENT AND OPERATION STATUS

The Don Diego Phosphorite Project is in the exploration stage with sufficient data to confirm the geology continuity of the deposit and the initial estimation of measured, indicated and inferred resource tonnes of marketable quality phosphate rock concentrates.

Bench scale testing of each core in the principal mineralized zone, known as the Don Diego West Phosphorite Deposit, defined the ore characteristics and provided material for testing optional mineral beneficiation processes. A conceptual mining process has been defined and an experienced dredging company has been approached to provide contracted dredging services to recover the phosphorite ore.

The project is in a mature exploration stage and progressing toward being reclassified as an early stage development project.

1.6 CONCLUSIONS OF THE QUALIFIED PERSON

The Don Diego Mineral Concession contains an enriched, sedimentary marine phosphorite with the potential to yield a commercial phosphate rock concentrate using known procedures for mining (dredging) and mineral processing (washing, sizing, attrition, flotation and density separation).

The measured phosphorite resource for the Don Diego West Phosphorite Deposit is estimated at 106.9 million ore tonnes at 18.44% P_2O_5 contained within an area of 27.83 km^2. The average overburden thickness is 1.04 meters overlying an average of 2.75 meters of phosphorite. While the deposit is continuous, additional drilling will be required to link the areas containing measured resources.

The indicated phosphorite resource for the Don Diego West Phosphorite Deposit is estimated at 220.3 million ore tonnes at 18.71% P_2O_5 contained within an area of 55.49 km^2. The average overburden thickness is 1.16 meters overlying an average of 2.82 meters of phosphorite.

The inferred phosphorite resource for the Don Diego West Phosphorite Deposit is estimated at 166.4 million ore tonnes at 18.89% P_2O_5 contained within an area of 40.74 km^2. The average overburden thickness is 1.34 meters overlying an average of 2.97 meters of phosphorite.

The overall dimensions of the Don Diego West Phosphorite trend is estimated at 124 km^2 within the Don Diego Mining License. Legal counsel for Exploraciones Oceanicas has stated that the company has applied for additional mining licenses along the trend to the northwest and to the southeast of the current Don Diego Mining License boundaries and is awaiting approval. By acquiring this additional area and performing sufficient core drilling, sampling and testing, there is a significant potential to increase its phosphorite resources.

The geologic boundaries of the Don Diego West Phosphorite Deposit appear to be open to the northwest, to the southeast, at depth and to the west. Future drilling results coupled with appropriate sampling and laboratory testing has the potential to further define the geologic continuity of the deposit and increase the mineral resource estimate.

Preliminary assaying and metallurgical testing of the core samples at approximately one meter intervals indicates the potential to produce a phosphate rock concentrate at 28% to 30% P_2O_5 with a favorable CaO/P_2O_5 ratio of 1.5 to 1.55 and a Minor Element Ratio (MER) of 0.07 to 0.08. The chemical analysis suggests that the concentrate would be suitable for the production of phosphoric acid using the wet process methods.

1.7 RECOMMENDATIONS OF THE QUALIFIED PERSON

The QP recommends the following:

- Implement a drilling, sampling and testing program when the additional mining licenses are granted;
- Update and revise the phosphate rock concentrate resources with the additional data from the new mining licenses;
- Complete a continuous wet process phosphoric acid pilot plant test using a representative bulk sample of the Don Diego Phosphate Rock Concentrate;
- Apply for additional mining licenses within the Done Diego Mineral License for those areas that have been abandoned by other parties;
- Commission a market analysis for the project and investigate the opportunities for off-take agreements;
- Develop a conceptual 20-year mine plan with a supporting production schedule;
- Begin a basic engineering assessment (FEL 3) of the project using a third-party engineering company experienced in marine mining and phosphorite mineral processing;
- Develop reliable capital and operating cost estimates; and,
- Develop a Financial/Economic model.

2.0 ITEM 4: INTRODUCTION

2.1 SPONSOR AND REPORT PURPOSE

This Technical Report was prepared for Oceanica Resources, S. de R.L. (Oceanica), whose office is located at 5215 West Laurel Street, Tampa, Florida 33607.

The report provides a framework for the status of the DD West Phosphorite Deposit for Oceanica's management, provides guidance for future project tasks in order to develop a NI 43-101 style document stating the proven and probable mineable reserves, and may be used to introduce or update private investors to the Don Diego Phosphorite Project (Project).

2.2 INFORMATION SOURCES

Information and data sources contained in this technical report and used in its preparation include those published and unpublished documents listed in Section 21 as references. In addition, the report relies heavily upon core drilling, sampling and testing of the phosphorite ore performed under the direction of the Project staff and consultants. Testing included ore assays; physical testing to determine moisture content, bulk density, and grain size distribution; mineralogy; ore chemistry; metallurgical beneficiation options; product yields and chemistry; and, beneficiation process losses. The laboratory testing was performed by the Florida Industrial and Phosphate Research Institute (FIPR) with flotation tests performed by Ed Finch and Associates, LLC. Initial testing procedures were planned and directed by the Project staff in consultation with the FIPR staff. The ore characterization and beneficiation testing procedures were defined by Mineral Resource Associates (MRA) in consultation with the FIPR staff and approved by the Project staff. Data analysis, calculation procedures and resource estimates were prepared by MRA.

2.3 PROPERTY INSPECTION

The Don Diego Phosphorite Deposit is a seafloor occurrence of phosphate rock located in the Pacific Ocean offshore from the Baja Peninsula of Mexico. The phosphorite mineralization is exposed on the seafloor surface or covered by a thin layer (1 to 2 meters) of lower grade, phosphatic quartz sands at water depths generally ranging from 70 to 90 meters.

Mr. Henry J. Lamb, the principal author and editor for this report, has not visited the site. Due to the lack of direct access to the mineralization, for this specific deposit not visiting the site is not a material deviation from the requirements of a NI 43-101 Technical Report.

The exploration vessel was contracted by the Project and under the command of an independent Captain. Appendix A contains a letter signed by Torguil MacGregor, Operations Manager for Hays Ships, stating that while under the command and control of a Captain and crew contracted by Hayes Ships Ltd that the Research Vessel *Dorado Discovery* was on-site and engaged in multibeam sonar mapping and seabed coring at the Don Diego Mineral Concession from October 11, 2012, to March 1, 2013. Additional verification is available by inspecting the Ship's Log Book held on the Bridge of the *Dorado Discovery*.

3.0 ITEM 5: RELIANCE ON OTHER EXPERTS

During the preparation of this report, the qualified person has relied upon reports, opinions and statements from the following persons:

Dr. Brian Parsons, a geologist, provided draft text to those subsections related to the shipboard exploration activities. The text was edited by the QP prior to inclusion in the report. He was interviewed by the QP during the document preparation.

Mr. Francisco Xavier Manzanero Escutia, a licensed attorney in Mexico and affiliated with Hamdan, Manzanero y Asociados, S.C. , has provided a legal opinion as to the status of the mineral exploration leases held by Odyssey or its affiliates.

Mr. David Kronenfeld, the Associate General Counsel for Odyssey Marine Exploration has provided information related to Subsections 1.2, 4.4 and 4.9. He reviewed the material included from a Baker & McKinsey publication pertaining to Mining Law in Mexico.

Mr. Mark Mussett, a geologist, provided draft text for subsections 4.1, 4.2, 4.3, 4.5, 5.1, 5.2, 5.3, 5.4, 5.5, 6.2, 7.1 and 7.2.

Ms. Melinda J. MacConnel, Executive Vice President, Secretary and General Counsel for Odyssey Marine Exploration, provided corporate structure information used to prepare Subsection 4.4, Table 4-1, and Figure 4-1.

Additional information about these individuals is contained in Appendix B.

4.0 ITEM 6: PROPERTY DESCRIPTION AND LOCATION

4.1 PROPERTY AREA

The Don Diego Phosphorite Deposit lies within the confines of the Don Diego Mineral Concession, a property consisting of 268,235 contiguous hectares.

4.2 PROPERTY LOCATION

The subject property is located using a multi-point polygonal property demarcation bounded by latitudes 26.1°, 25.60°, and longitudes -112.12°, -112.80° WGS 1984. It is plotted and recorded in NAD27 for Mexican governmental documentation. Table 4-1 is a listing of the Don Diego Mineral Concession vertices and Table 4-2 is a vertices listing defining the out parcels boundary as shown in Figure 4-1.

TABLE 4-1 VERTICES DEFINING THE DON DIEGO MINERAL CONCESSION BOUNDARY

Vertices	Latitude	Longitude	Vertices	Latitude	Longitude
1	26.100	-112.800	18	26.068	-112.560
2	25.600	-112.800	19	26.068	-112.590
3	25.600	-112.200	20	26.086	-112.590
4	25.750	-112.200	21	26.086	-112.667
5	25.750	-112.120	22	26.000	-112.667
6	25.805	-112.120	23	26.000	-112.767
7	25.805	-112.200	24	25.955	-112.767
8	25.900	-112.200	25	25.955	-112.717
9	25.900	-112.300	26	25.914	-112.717
10	25.960	-112.300	27	25.914	-112.667
11	25.960	-112.350	28	25.862	-112.667
12	26.033	-112.350	29	25.862	-112.504
13	26.033	-112.290	30	26.058	-112.504
14	26.057	-112.290	31	26.058	-112.290
15	26.057	-112.504	32	26.100	-112.290
16	26.029	-112.504	33	26.100	-112.800
17	26.029	-112.560			

TABLE 4-2 VERTICES DEFINING THE OUT PARCELS BOUNDARY

Vertices	Latitude	Longitude	Vertices	Latitude	Longitude
1	25.81	-112.12	9	26.10	-112.29
2	25.81	-112.20	10	26.10	-112.80
3	25.90	-112.20	11	25.60	-112.80
4	25.90	-112.30	12	25.60	-112.20
5	25.96	-112.30	13	25.75	-112.20
6	25.96	-112.35	14	25.75	-112.12
7	26.03	-112.35	15	25.81	-112.12
8	26.03	-112.29			

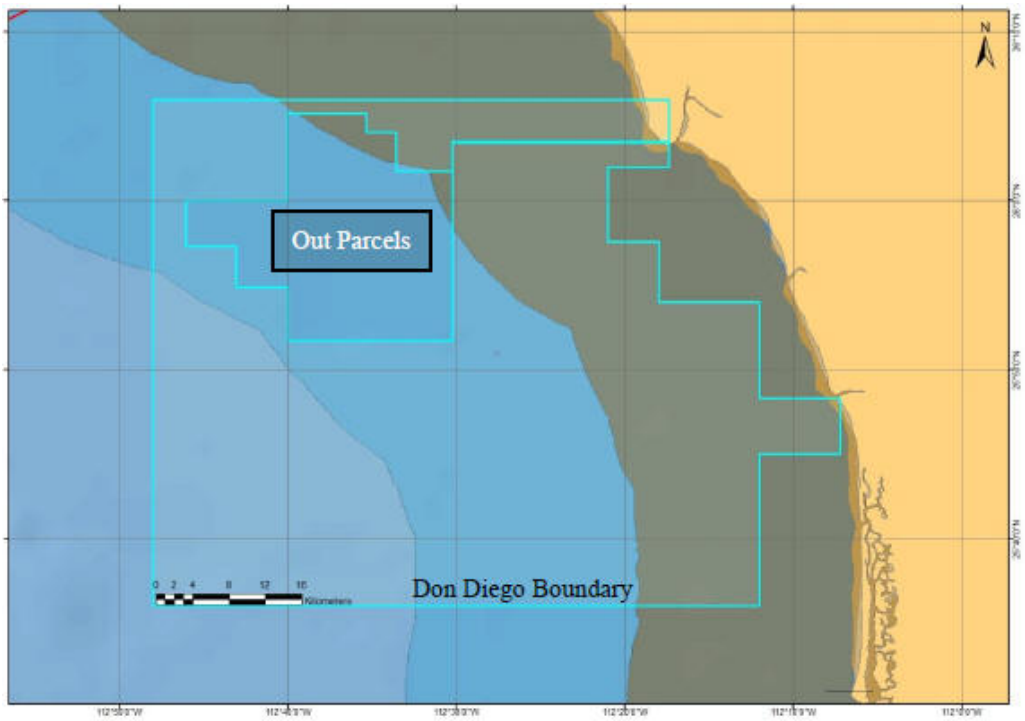

Figure 4-1 Configuration of the Don Diego Mineral Concession

4.3 MINERAL TENURE

The mineral tenure, officially recorded as 'Don Diego', consists of a Title of Mineral Concession, Number 240744 and is administered by the Secretary of the Economy, Coordinacion General de Mineria, Direccion General de Minas. The sub-agency drafting the title is 'La Paz, Baja California Sur'. The title is valid for a period of 50 years from June 28, 2012, through June 27, 2062.

A copy of the Don Diego Title of Mineral Concession is included as Appendix C.

4.4 TITLE, INTEREST, RIGHTS AND OBLIGATIONS

4.4.1 Title

The Don Diego Mineral Concession was granted to Exploraciones Oceanicas, S. de R.L. de C.V. by the Secretaria de Economia, Coordinacion General de Mineria, Direccion General de Minas on June 28, 2012, and is valid for 50 years. The granting document is entitled, "Titulo de Concesion Minera Numero 240744."

4.4.2 Interest

The concession owner, Exploraciones Oceanicas, S. de R.L. de C.V., is owned 99.998% by Oceanica Resources S. de R.L. and 0.002% by Daniel De Narvaez McAllister.

In turn, Oceanica Resources S. de R.L is a Panamanian entity with Odyssey Marine Enterprises, Ltd. being the principal shareholder. Table 4-3 outlines the Oceanica Resources ownership. Odyssey

Marine Enterprises, Ltd., a 100% owned subsidiary of Odyssey Marine Exploration, Inc. (Odyssey), owns 54.0449% of Oceanica Resources S. de R.L. Figure 4-2 illustrates the legal relationship among the various entities.

TABLE 4-3 OWNERSHIP OF OCEANICA RESOURCES S. DE R.L.

Partner	% Ownership
Odyssey Marine Enterprises, Ltd.	54.0460
DNA LTD, Inc.	18.3816
Mako Resources, LLC	23.9760
DFC Inversions SAPI de C.V.	1.4985
Hamdan y Manzanero SAPI de C.V.	1.4985
St. Vincent Bay Exploration Projects, Ltd.	0.4995
Subsea Minerals, Ltd.	0.0999
Total	100.0000

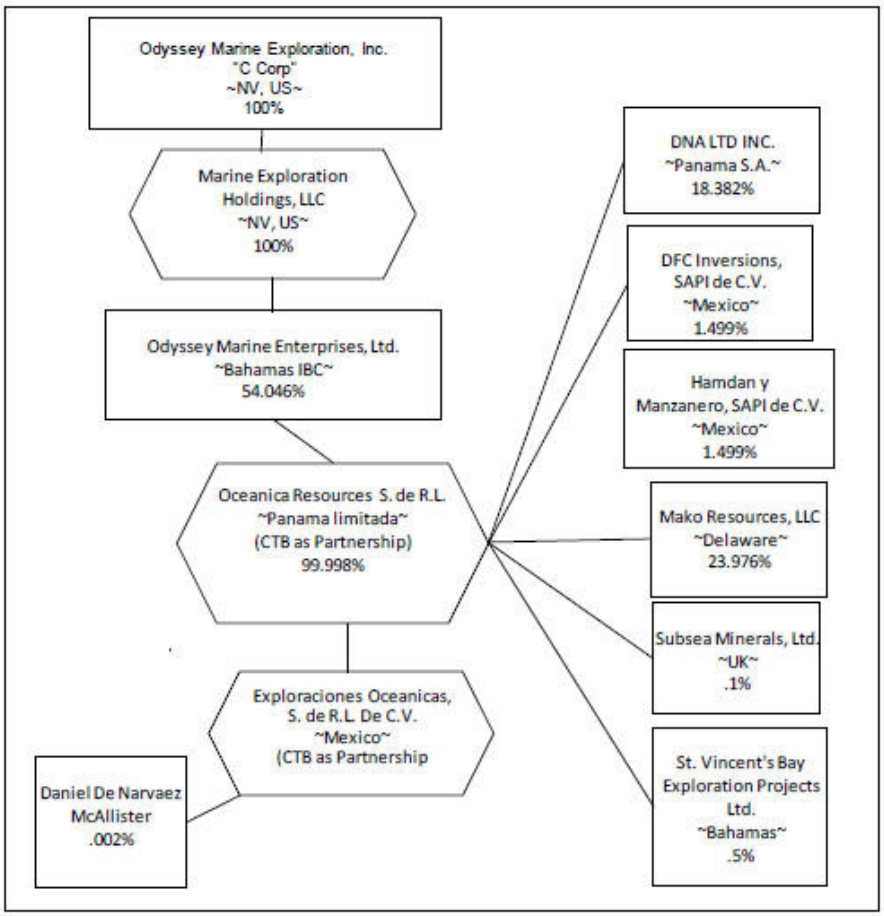

Figure 4-2 Corporate Structure

4.4.3 Rights and Obligations

The following description of rights and obligations is taken from a publication prepared by Baker & McKinsey, a leading international legal firm with significant background in Mexican Mining Law. Baker & McKinsey state:

Pursuant to the amendment of the Law of April 28, 2005, there is currently no distinction between the exploration and exploitation of mining concessions. The amendment to the designation of a single type of mining concession (exploration and exploitation) in the Law was conditioned to the publication in the FOG of the amendment to the Federal Fees Law (Ley Federal de Derechos) in connection to fees payable by mining concessions holders, such amendment was published in the FOG last December 21, 2005.

The Law currently provides the existence of mining concessions which allow the owner to perform:

- exploration works on the ground with the purpose of identifying mineral deposits and quantifying and evaluating economically usable reserves and accordingly perform work to prepare and develop areas containing mineral deposits:, and
- exploitation works to detach and extract mineral products from such deposits.

Mining concessions have a duration of 50 years from the date of their recording in the Registry. They may be extended for an equal term if:

- the holder does not cause cancellation of the concession by any act or omission sanctioned by the Mining Law; and
- the holder requests an extension within five years prior to the expiration date.

Mining concessions licenses do not grant rights comparable to a freehold or leasehold, given that they do not confer direct property rights to the parcel of land involved, except for the rights to:

- carry out works of concessions or exploitation within the mining lot covered by the concession;
- dispose of mineral products obtained from such works during the term of the concession;
- dispose of the debris within the area covered by the concession, unless it originates in another concession in force;
- obtain the expropriation, temporary occupation or establishment of an easement on the lands required to carry out the works of exploration, exploitation and processing, as well as the disposal of debris, rocks, clinker and slag heaps, and to establish underground right of way easements;
- obtain certain water rights related to the concession for the exploration, exploitation and processing of minerals and substances obtained and for the domestic use of the same for the employees of the mines;
- obtain preference on the concessions from the water of the mines for any use different from the foregoing, in accordance with the terms of the applicable law;
- transfer title to the concession or assign rights thereunder to persons legally permitted to receive such rights;
- segregate or consolidate mining lots;
- waive title and rights derived from mining concessions; and,
- obtain the extension of the mining concessions for a subsequent 50-year term.

The Mining Law imposes the following obligations on concessionaires:

- Start operations of the exploration or exploitation 90 days following the date on which the concession is recorded before the Registry, and incur and evidence certain minimum investment or obtain economically useful minerals in the amounts provided under the Regulations;

- Pay mining concession fees;
- Comply with technical safety and environmental standards;
- Maintain in place permanent fortification works, shoring and other installations necessary for the stability and safety of the mines;
- Maintain the landmarks in the same place and in good condition;
- Provide the Ministry with statistic, technical and accounting reports in terms of the Regulations and Law;
- Allow inspection visits from the Ministry;
- Provide the Ministry with geological-mining reports when the mining concession is cancelled due to expiration, abandonment, substitution or reduction, sanction or judicial resolution;
- Provide the Mexican Geological Service, in case of mining concessions granted through a bid process, semi-annual reports of the works carried out and the production obtained from the lot covered by the concession for payment control of the finders' fee or other economic fees provided in favor of such organism; and
- File checking reports before the Ministry every May and shall refer to works carried out from January to December of the preceding year.

MRA has not reviewed the 2013 Mining Law. MRA has requested comments from Oceanica or its legal counsel regarding changes in legislation that may impact the Don Diego Phosphorite Project.

4.5 LOCATION OF PROPERTY BOUNDARIES

The coordinates for the Don Diego Mineral Concession boundary were established by means compliant with corporate governance and through corporate legal counsel, Hamdan, Manzanero y Asociados, S.C. Counsel selected, Ing. Francisco Javier Lopez Olivas, a licensed mining surveyor approved by the Direccion General de Minas to install three distinct, land-based monuments and using those monuments, as reference points, to establish the concession boundary.

The property boundaries as defined by Ing. Olivas were charted using ESRI ArcMap 10.0 by the Odyssey staff for use during the field work activities and for preparation of project maps. MRA has used the data to develop working maps for the assignment of polygonal areas of influence for each drill hole.

4.6 LOCATION OF ADJACENT MINERALIZATION, RESOURCES, RESERVES, WORKINGS AND FACILITIES

There are no known mineralized zones, mineral resources, mineral reserves and mine workings, existing tailing ponds, waste deposits and important natural features and improvements, adjacent and relative to the outside property boundaries. The Santo Domingo Phosphate Mine, located near shore and to the southeast, was operated by ROFOMEX, a company owned by the Government of Mexico, from circa 1981 to 1985.

4.7 ROYALTIES, BACK-IN RIGHTS, PAYMENTS, AGREEMENTS, AND ENCUMBRANCES

The property is subject to rents, fees and other payments to the Government of Mexico or its designated government ministry or agency. The anticipated annual obligations for the first five years of the mineral license are listed in Table 4-1.

TABLE 4-4 DON DIEGO MINERAL LICENSE RENT SCHEDULE

Year	Area (Hectares)	Semi-Annual Rent (Pesos) First Half	Semi-Annual Rent (Pesos) Second Half	Semi-Annual Rent (US$) First Half	Semi-Annual Rent (US$) Second Half
2012	268,238	0	1,528,958		$ 113,907
2013	268,238	1,528,958	1,528,958	$ 113,907	$ 113,907
2014	268,238	2,285,389	2,285,389	$ 170,261	$ 170,261
2015	268,238	2,285,389	2,285,389	$ 170,261	$ 170,261
2016	268,238	4,726,356	4,726,356	$ 352,114	$ 352,114

In a letter from Hamdan, Manzanero y Asociados, S.C., legal counsel for Exploraciones Oceanicas, S. de R.L. de C.V., dated June 19, 2014, it is stated "that all the reports and mining fees pertaining thereto have been filed and paid properly and on time." The mining fees are current through the first semester of 2014. The letter further states "that EXO is the legal holder of the Mining Concession Number 240744 named Don Diego, which at the present time is in full force and effect and will expire on June 27, 2062."

In October 2013, the Mexican Senate passed legislation that included a 7.5% profits tax on mining products.

Odyssey has not disclosed any back-in rights, payments, agreements or encumbrances related to the Don Diego Phosphate Project.

4.8 ENVIRONMENTAL LIABILITIES

Currently, there are no pre-existing environmental liabilities to which the property is subject. There are no facilities located on the property and no prior activity related to mining other than those activities of core hole drilling and sampling normally associated with mineral exploration.

4.9 PERMITS

Oceanica is completing a review of its Environmental and Social Impact Assessment (ESIA) prior to filing with the Department of the Environment and Natural Resources (Semarnat). Given approval of the ESIA, Oceanica will finalize a list of required permits and will begin to file the necessary applications.

5.0 ITEM 7: ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 TOPOGRAPHY, ELEVATION AND VEGETATION

The Don Diego Mineral Concession is located on the seafloor off the west coast of Baja California Sur, Mexico. In general the seafloor topography within the concession area is a described as the leading edge of the continental margin and continental shelf bathymetry. The site bathymetry was determined using a shipboard multibeam sonar. Reliance on available pre-existing bathymetry indicates a general seaward-deepening shelf progression. Within the DD West Phosphorite Deposit, the seafloor slopes with depths of approximately 70 meters along the shoreward extent to about 90 meters along the seaward extent. Bathymetric profiles strike NW-SE isobathycally, dipping NE-SW at slope angles representative of shelf margin characteristics.

Subject to confirmation by additional and deeper drilling, the DD West Phosphorite Deposit may be a synclinal bathymetry feature within a paleo-coastal ridge and runnel system trending axially along a meandering NW-SE directional bearing. The ridge and runnel system does not accurately parallel the coastline, ranging from approximately 10 nautical miles from shore in the south to 20 nautical miles in the north. Seaward of the deposit, a bathymetric high consisting of sandy shoals may be a key factor in influencing oceanographic circulation contributing to the deposit formation. The deposit lies on a normal sloping segment of the Pacific leading edge of the continental margin, in water depths of 70 to 90 meters, bounded on the seaward side by gradually increasing water depths up to 100 meters until contacting an offshore bathymetric high with minimum depths of about 50 meters. Landward of the deposit, an intermediate boundary with a hardbottom feature consisting of outcropping sedimentary rock typifies the deposit contact. Shoreward of the hardbottom feature, the margin gradually slopes with decreasing depths landward until the littoral environment is encountered. Immediately shoreward of the hardbottom a separate potential phosphorite deposit, of lower ore grade, has been located.

The vegetation is non-existent for emergent or submergent vegetation in that portion of the surveyed property. Phytoplankton is present in surficial waters and studies of the biomass of planktonic/nektonic organisms are part of the environmental assessment.

5.2 PROPERTY ACCESS

Access to the site is by sea-going vessels dispatched from various ports with San Diego, California being the primary port for logistical and operating support. Additional facilities are available at Lázaro Cardenas, Mexico, La Paz, Mexico and Long Beach, United States. Puerto San Carlos, the closest port facility, has been considered for crew and equipment logistics; however, the Project team evaluated the environmental conditions and working restrictions near Bahia Magdalena and chose to minimize activities in this area.

Offloading of all core samples collected during drilling programs occurred at the Port of San Diego under the auspices of United States Customs.

Airstrips exist at Adolfo Lopez Mateos (50 km) south-southeast of the concession and at Las Barrancas on the shoreline adjacent to the tenement. Aerial photographs indicate that both airstrips are poorly suited for commercial traffic.

5.3 POPULATION CENTERS AND TRANSPORT

The Pacific coastline near the Don Diego Mineral Concession is sparsely populated with a few small villages, towns and individual houses. These small population centers are associated with the fishing and agriculture industries and offer limited support for a mining operation.

Comondú is a municipality (county) in the state of Baja California Sur and the nearest municipality to the Don Diego Mineral Concession. It reported a population of 70,816 inhabitants in the 2010 census and has a land area of 16,858.3 km^2. The municipal seat is located in Ciudad Constitución.

Survey monuments have been constructed on the Mexican coastline from which the tenement has been surveyed. The central survey monument lies adjacent to the Puerto San Andresito lighthouse. No sophisticated port facilities exist at this location.

Principal towns near the survey monument at Puerto San Andresito are inland and include Francisco Villa and La Poza Grande. Francisco Villa is about 9 kilometers S88.4°E of the nearest survey marker. The town juxtaposes Highway 53 and lies on the approximate latitude of the survey monument. Access to the survey monument location and Puerto San Andresito via a secondary, unnamed road.

La Poza Grande Villa, population of approximately 500, is about 10 kilometers S60.55°E of the nearest survey marker. This village is southwest of Francisco Villa, west of Highway 53 and is connected to the survey monument location as well as Puerto San Andresito via a secondary, unnamed road.

Access to the Don Diego Phosphorite Deposit from listed population centers would be by sea-going vessel with the exception of two sites in the proximity of Puerto San Andresito and La Bocana where the concession includes terrestrial property. Direct visitation to the phosphate mineralized portion of the property would be by a sea-going vessel or flyover.

5.4 CLIMATE AND OPERATING SEASON

The region is subject to seasonal monsoon conditions and the El Nino/La Nina Southern Oscillations. Pending seasonal weather intrusions, no prohibitive weather window has been delineated. Surface currents in and adjacent to the Don Diego Mineral Concession range from approximately 0.3 to 0.6 knots, setting in a south-southeast direction. Similar current speeds are modeled for a 20-m depth but the currents set in a more southerly direction. At a 50-m depth currents slacken, ranging from about 0.1 to 0.2 knots, with set ranging from southeast-by-east to south, becoming more southerly in shoreward positions. Currents at 100 and 200 meters adjacent to the deposit area range from about 0.0 to 0.1 knots with a variable set ranging from east-northeast to south. Salinity at the surface ranges from about 33.9 to 34 practical salinity units (psu), with similar properties at depth. The SST (Sea Surface Temperature) may exhibit some seasonal variation and is influenced by El Nino oscillations. Generally, surface temperatures are on the order of 17°C, decreasing in the water column to a temperature on the order of 12°C at 100 meters.

Waves are influenced by seasonal monsoon activity. In non-monsoon events, wave heights on the order of 1 to 2 meters exist, setting in a southeasterly direction with a period ranging from 12 to 20 seconds.

During monsoon events wind, wave height and wave period can be variable. Wave heights on the order of three meters are to be expected. The period fluxuates pending storm location and energy. Wind speed and direction can be variable and may exceed forty knots. The area has experienced direct influence from tropical monsoon activity as many as six times in one season (records are available since 1949), though the average occurrences per year effecting the property average less than two events.

Conceptually, mining will be planned for 315 days per year allowing sufficent time for vessel and equipment maintenance, logistical considerations, and some allowance for weather interference. If possible, scheduled allotments of non-operational days may fall within the months of July, August, September and October in order to account for the greatest likelihood of severe weather impediments to operations.

5.5 INFRASTRUCTURE

There is no infrastructure available within the Don Diego Mineral Concession other than an abundance of sea water which may be used for offshore mineral processing.

It will be necessary to incorporate the infrastructure development into the mine development plan. The Project team has been engaged with marine mining engineers and an internationally experienced dredging company to conceptually define the mining and infrastructure requirements.

6.0 ITEM 8: HISTORY

6.1 PRIOR OWNERSHIP

The mineral concession granted by the Government of Mexico to Exploraciones Oceanica, S. de R.L. de C.V, a partly-owned (54.0449%) subsidiary of Odyssey Marine Exploration, Inc., for the Don Diego Mineral License in June 2012, is believed to be the first for the subject property.

Nearby concessions have been granted to Innophos and PhosMex that are adjacent to and are a window within the Don Diego Mineral Concession. Oceanica believes that portions of these prior concessions have been abandoned and Oceanica may file the appropriate documents to include any areas found to be abandoned and thereby expand its current holdings.

6.2 PRIOR EXPLORATION

Prior exploration work, that resulted in the PhD dissertation of B. F. D'Anglejan (1965), was regional in scope with a wide-spaced, 8 by 16-km grid, sampling program consisting of 2-inch gravity cores to depths of 1 to 1.5 meters, dredge hauls and grab samples providing superficial coverage of the seafloor.

There is no evidence of significant mineral exploration activities within the concession area held by PhosMex.

Innophos may have conducted an exploration program on its adjacent property of an estimated 13,474 hectares. However, the details and any findings have not been distributed in the public domain.

6.3 HISTORICAL RESOURCE AND RESERVE ESTIMATES

In 1967, D'Anglejan extrapolated a regional deposit mass of 1.5 to 3.0 billion tonnes of P2O5. This is a historical, scientific estimate for a regional occurrence and does not conform to reporting requirements for NI 43-101 documents.

6.4 PRODUCTION HISTORY

The DD West Phosphorite Deposit has undergone a detailed mineral exploration and evaluation program. There is no historical production from this property.

7.0 ITEM 9: GEOLOGICAL SETTING

7.1 REGIONAL GEOLOGY

The regional geology pertaining to the offshore Baja California phosphorites was most extensively researched by D'Anglejan (1967) who published the following summary.

"A bedded phosphoric facies, found within recent continental shelf sediments off the west coast of Baja California (Mexico), between 24º and 26º N latitude, was investigated. Local conditions appear to conform closely with the environmental prerequistes to large-scale phosphate deposition as inferred from observation on ancient marine phosphorites. The deposit occurs on a shallow platform marginal to a trough restricted by submarine banks. Local seasonal upwelling supplies dissolved phosphate to the shelf at an estimated rate of $70 \cdot 10^{15}$ tons P_2O_5/year and effective biological factors are observed to concentrate and deliver yearly at least $3 \cdot 10^3$ tons P_2O_5 to the bottom sediments.

From extrapolations based on measured concentrations at the sediment surface, the mass of the deposit is estimated at 1.5-3 x 10^9 tons P_2O_5. At least 0.5-1 million years is required for the deposit to accumulate. Such an intreval of time for a deposit accumulating at shallow depth allows for profound mixing during transgressive-regressive cycles. Surface concentrations and size distribution of the phosphorite grains, pellets and bioclastic fragments are found to be related to the detrital part of the sediments and influenced by the same mechanical processes. Recent mineralization, if it occurs, has to be synchronous with reworking and is concealed.

Lithologically, the observed association of the carbonate fluorapatite with opaline silica and reducing fine muds evokes the well-known chert-carbonaceous shales-phosphorite association of ancient rocks. Evidence of current mineralization is rare; few cases of transitions from calcite to dolomite to carbonate-apatite are observed.

Absolute age determinations were attempted on the lattice-bound carbonate of the carbonate-fluorapatite. The dating of fossil apatite brachiopod valves shows that this structural carbonate is not subsequently exchanged once the mineral is formed. The observed carbon activities, corresponding to apparent ages between 10,000 and 27,000 years, may indicate the some apatite mineralization has taken place recently. Direct observations of the deposit suggest, however, that it is in part older than any carbon date obtained. The $^{238}U/^{230}Th$ ratios measured on two size fractions of the same sample correspond to an age of about $2 \cdot 10^5$ years but the applicability of this dating method to marine phosphorites is uncertain."

7.2 LOCAL GEOLOGY

The phosphorites of the Don Diego Mineral Concession are described in Section 7.3. The primary deposit is identified as the Don Diego West Phosphate Deposit and is an unconsolidated bed of phosphate pellets, quartz sand and silt, varying amount of clay, and mollusk shells and fragments. The phosphorite bed is exposed at the ocean floor surface to the East, and to the West is covered by a thin layer (1 to 2 meters) of quartz sand and silt. The phosphorite bed appears to slope at a low angle to the West (seaward) but additional exploration may identify a trough-like structure. Folding and faulting is absent within the phosphorite bed and subsequent to its deposition. The average thickness of the phosphorite bed is about three meters and locally exceeds six meters. The P_2O_5 content averages about 19%. The primary ore zone trends NW-SE over a distance of 50 km and ranges from 0.5 to 5 km in width representing an estimate mineralized area of 124 km^2, more or less.

7.3 PROPERTY GEOLOGY

The geologic knowledge of the Don Diego Mineral Concession has been greatly advanced by the scientific investigations performed by the Project staff. However, that knowledge is limited to the stratigraphy, lithology, mineralogy, and structure near the seafloor surface. As shown in Figure 7-1, the geology consists of three major components:

- DD West Phosphorite Deposit;
- Hardbottom Outcrop; and
- Don Diego East Phosphorite Occurrence.

7.3.1 Don Diego West Phosphorite Deposit

The DD West Phosphorite Deposit, where the highest visual phosphorite concentrations were found, trends NW-SE and is west of the hardbottom outcrop. The phosphorite bed outcrops on the sea floor and may extend to a depth of more than six meters. This deposit was comprised of medium to fine-grained phosphate pellets and quartz grains with varying quantities of mollusk shells and shell fragments as well as clay minerals.

The shells and shell fragments are more dominant in the +0.853 millimeters (+20 mesh) size fraction of the ore and in the uppermost one meter interval. Progressing stratigraphically downward the abundance of shell and shell fragments decrease and quartz sand to silt size grains become more dominant. The phosphate pellets dominate the -20+150 mesh size fraction of the ore. Erosion features such as stream channels may be related to lower sea level during periods of advanced glaciation.

The general ore character of the DD West Phosphorite Deposit is superior to other phosphorite occurrences found within the Don Diego Mining License and is the focus of this Technical Report.

7.3.2 Hardbottom Outcrop

The hardbottom, a seafloor exposure of cemented clastics and carbonates, appears to act as a physical barrier to the eastward deposition of the Don Diego West Phosphorite Deposit.

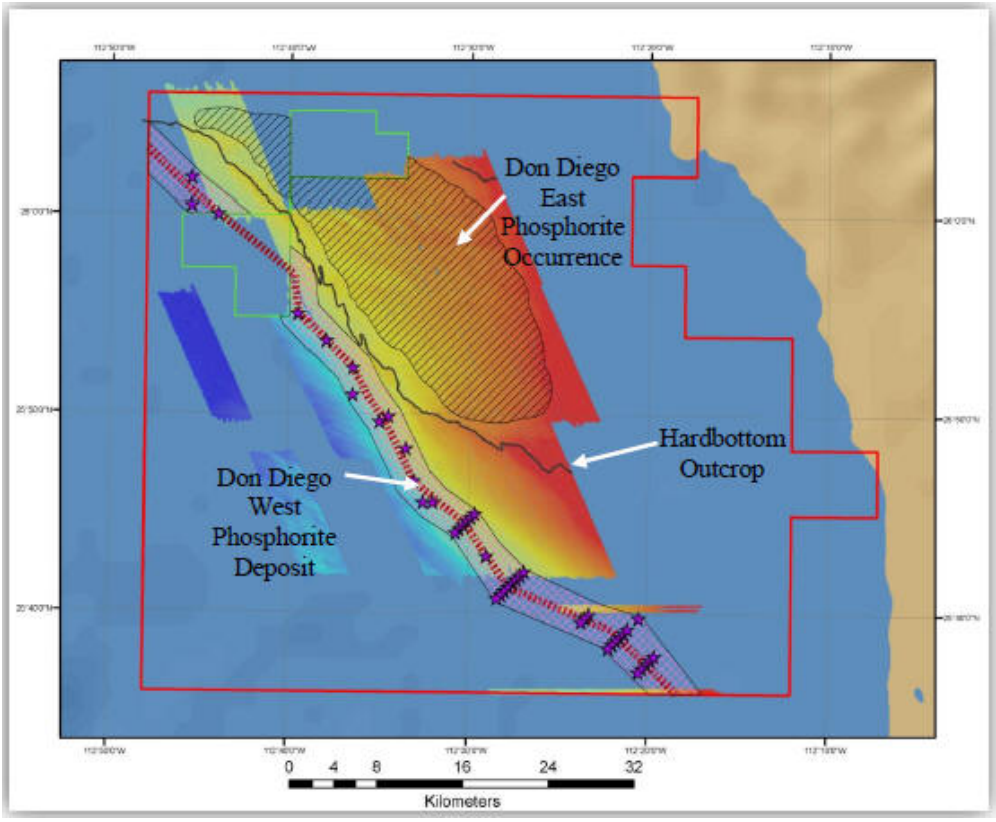

Figure 7-1 Location of the Don Diego West Phosphorite Deposit Relative to the Hardbottom Outcrop

7.3.3 Don Diego East Phosphorite Occurrence

The Don Diego East Phosphorite Occurrence lies east of the hardbottom, has visually low to moderate concentrations of phosphorite pellets in a quartz sand/silt host containing an abundance of mollusk shell fragments and complete shells with varying amounts of clay minerals.

Clay/silt sediments have very little to no visual phosphorite pellets located within the matrix. At several locations gravels dominated the facies. The gravels were located in poorly-sorted beds indicative of antecedent stream channels. Very little to no phosphorites were observed visually in the gravel facies.

8.0 ITEM 10: DEPOSIT TYPES

Marketable phosphate rock is mined and produced from two principal types of deposits: 1) marine sedimentary phosphorites; and, 2) igneous apatite. The historical production from guano deposits and phosphate rock formed by limestone replacement have significantly declined and now represents less than 1% of world production. Phosphate rock is a commercial term defining the phosphate mineral beneficiated to a product that is suitable for the production of wet process phosphoric acid. Figure 8-1 illustrates the location the major phosphate rock deposits around the world.

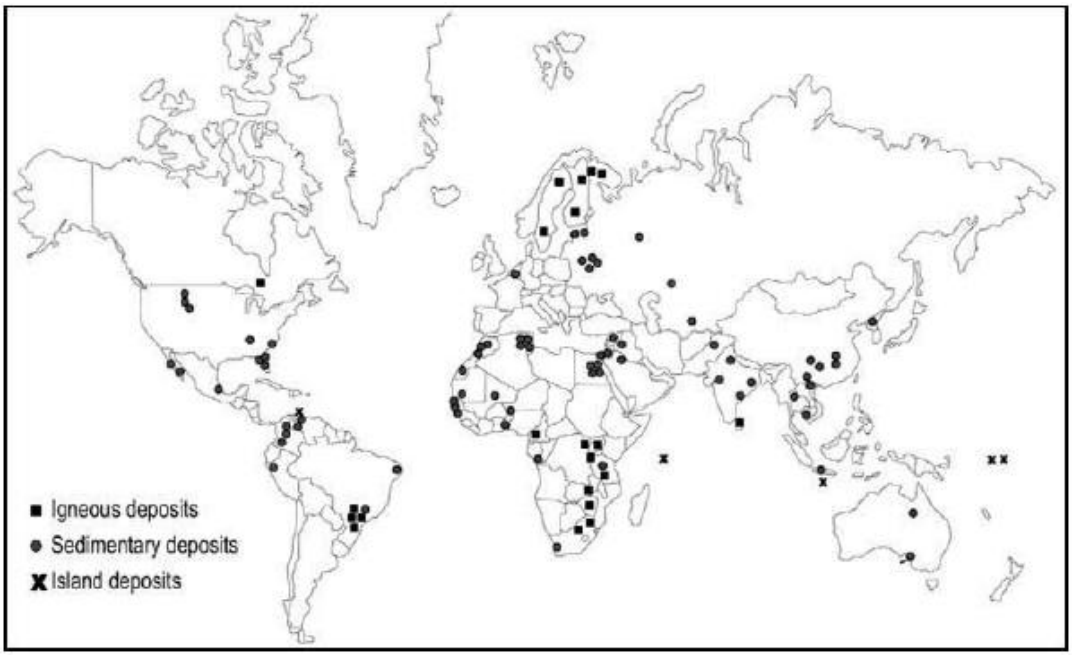

Figure 8-1 Principal Phosphate Rock Deposits

8.1 MARINE SEDIMENTARY PHOSPHORITES

Phosphorite is a general term that describes naturally occurring mineral assemblages containing a high concentration of phosphate minerals and typically deposited in a marine sedimentary environment. These deposits provide 80% to 90% of the world production of phosphate rock concentrates. They occur in formations of widely varying geological ages, exhibit a range of chemical compositions and physical forms, often occur as relatively flat-lying, thick beds, and underlie varying thicknesses of overburden. Those deposits accounting for most of world phosphate rock production are in Morocco and other North African countries, the United States, the Middle East and China. Most sedimentary deposits contain a carbonate-fluorapatite called francolite.

8.2 IGNEOUS APATITES

Igneous deposits provide about 10% to 20% of world production. Common subtypes of igneous phosphate deposits are associated with carbonatites and magnetite-apatite-ilmenite complexes. Such deposits are exploited in Russia, Canada, South Africa, Brazil, Finland, and Zimbabwe and undeveloped deposits occur in the producing countries as well as in Uganda, Malawi, Sri Lanka and several other locations.

Igneous apatite deposits are hosted by wide range of rock types. These deposits usually contain varieties of fluorapatite with the calcium phosphate mineral hydroxy-fluorapatite being the principal phosphate mineral. Francolite (carbonate-fluorapatite) occurs predominantly as a secondary mineral in weathering or leached zones. Most deposits occur in plug-like and curved bodies forming rounded, intrusive masses or ring complexes generally of relatively small size and with steeply dipping or vertical walls. Associated plutonic rocks consist predominantly of nepheline-syenites, carbonatite, and alkaline ultramafic assemblages. At least six well-defined apatite associations are recognized, the most commercially prominent is the ijolite-urtite rocks of the Khibiny Complex in Russia. Others of economic importance include apatite-olivine and apatite-olivine-magnetite (phoscorite) assemblages, apatite-bearing mica pyroxenites, apatitic-carbonatites and their weathering derivatives.

8.3 DON DIEGO PHOSPHORITES

The Don Diego Phosphorite Deposits are classified as a submerged marine phosphorite of relatively recent geologic age. With the exception of being submerged, the exploration and sampling techniques utilized for the Don Diego Phosphorites are similar to those applied to land-based phosphorites.

The Don Diego Mineral Concession contains two identified phosphorites referred to as the DD West Phosphorite Deposit and the Don Diego East Phosphorite Occurrence separated by the hardbottom feature.

Initial drilling, sampling, testing and analysis confirm that the DD West Phosphorite Deposit has a more significant opportunity for development and is the focus of this technical report. The deposit consists of a single, marine sedimentary bed known to be up to six meters thick in a sandy clay to clayey sand matrix, medium to fine grain, black to dark green in color and with phosphorite pellets, quartz and calcite as sea shells and fragments forming the main mineral components.

The DD West Phosphorite Deposit is not unique to the phosphate rock industry. At least two other seafloor phosphorites, Chatham Rise offshore New Zealand and Sandpiper offshore Namibia, are at various stages of exploration and development. In addition to the Sandpiper Phosphorite Deposit, smaller deposits are being investigated offshore Namibia. Seafloor phosphorites occurrences are also known to exist offshore South Africa, India, Peru and in the United States offshore California, North Carolina, Georgia and Florida.

9.0 ITEM 11: MINERALIZATION

9.1 GEOLOGIC STRUCTURE

The Don Diego Phosphorite Deposit is a seafloor occurrence and is a member of the family of marine sedimentary phosphorites.

The geologic structure for this deposit is a monoclinal, sedimentary bed dipping at a low angle, westward toward the open ocean. The deposit appears to be unaffected by fracturing, faulting, and folding and has not been subjected to metamorphism.

9.2 STRATIGRAPHY

The stratigraphy of the Don Diego West Phosphorite is extremely simple. The eastern portion of the deposit is exposed on the sea floor, appears to be partly eroded and therefore thinning to the east. The outcropping band is about two kilometers wide and west of the hardbottom feature.

To the west the deposit is overlain by a thin bed of unconsolidated, weakly phosphatic, quartz sand to clayey sand forming a protective overburden.

The maximum thickness of the phosphorite bed is unknown but is known to exceed six meters in individual drill holes. The upper and lower contacts with non-phosphatic material are relatively sharp.

9.3 TEXTURE

The phosphorite is an unconsolidated phosphatic sand, dark gray to black in color, that is well sorted with varying amounts of phosphatic pellets, quartz sand and silt, mollusk shells and shell fragments, and clay minerals in a clayey sand to sandy clay matrix.

The texture, being unconsolidated, is a key factor in the mineral beneficiation process and allows for a low cost washing and screening at 853 microns (20 mesh) to separate the majority of the coarse, +853 micron shells and shell fragments followed by scrubbing and a hydrocyclone separation at 104 microns (150 mesh) to remove the fine quartz, shell fragments and clay minerals.

9.4 MINERALOGY

Examination of the phosphorite ore under a binocular microscope identified three primary components: 1) phosphate rock pellets; 2) quartz; and, 3) mollusk shells and shell fragments. The phosphorite contains lesser quantities of clay minerals and may contain small quantities of heavy minerals.

D’Angeljan (1967) states that the phosphorites of Baja California occur as well-sorted, sand-size particles dominantly calcium phosphate in composition, within a fine sand to silt matrix. The calcium phosphate is present as a carbonate-rich apatite known as carbonate-fluorapatite.

As part of a worldwide investigation of subsea marine phosphorites, Dr. James R. Hein of the United States Geological Survey, was provided several samples of the Don Diego West Phosphorite Ore and overburden for an X-Ray Diffraction (XRD) mineralogy analysis. Table 9-1 provides the conclusions for those tests.

TABLE 9-1 PRELIMINARY DON DIEGO WEST PHOSPHORITE XRD MINERALOGY

Sample	Major	Moderate	Minor
RC-218 (0.00-1.00)	Aragonite	Feldspar, Quartz, CFA, Calcite	Amphibole
RC-218 (1.00-2.00)	CFA	Quartz, Feldspar	Illite
RC-218 (2.00-3.00)	CFA	Feldspar, Quartz	Calcite
RC-218 (3.00-4.00)	CFA	Quartz, Feldspar	Calcite
RC-218 (4.00-5.00)	CFA	Quartz, Feldspar, Dolomite	—
RC-218 (5.00-5.70)	Quartz, Feldspar	CFA, Pyroxene	Amphibole
RC-297 (3.00-4.00)	CFA	Feldspar, Quartz	—
RC-314 (2.00-3.00)	CFA	Quartz, Feldspar	Calcite
RC-329 (1.00-1.65)	CFA	Feldspar, Quartz, Calcite	Kaolinite, Smectite?
RC-329 (4.00-5.00)	CFA	Quartz, Feldspar	Calcite
RC-330 (4.00-4.30)	CFA	Feldspar, Quartz	Calcite
RC-331 (3.50-4.59)	CFA	Feldspar, Quartz	Calcite, Ankerite, Kaolinite
RC-332 (4.00-4.41)	CFA	Feldspar, Quartz, Calcite	Mica, Smectite, Zeolite
RC-334 (2.00-3.00)	CFA	Quartz, Feldspar	Calcite
RC-335 (1.00-2.00)	CFA	Quartz, Feldspar	Zeolite, Ilmenite?
RC-336 (0.00-1.00)	CFA	Feldspar, Aragonite, Quartz, Calcite	Zeolite, Amphibole
RC-340 (1.00-2.00)	CFA	Aragonite, Quartz, Feldspar	Calcite
RC-381 (2.40-3.60)	CFA	Quartz, Feldspar	Calcite
RC-383 (0.00-1.20)	CFA, Quartz, Feldspar	—	Smectite, Amphibole
RC-420 (2.40-3.40)	CFA	Feldspar, Quartz	Calcite
RC-451 (0.00-1.20)	CFA, Aragonite	Feldspar, Quartz, Calcite	Amphibole
RC-732 (1.00-2.00)	CFA	Quartz, Feldspar	Zeolite
RC-743 (0.00-1.00)	Quartz, Feldspar	CFA, Calcite	Amphibole
RC-743 (1.00-2.00)	CFA	Quartz, Feldspar	Calcite, Illite
RC-743 (2.00-3.00)	CFA	Feldspar, Quartz	—
RC-743 (3.00-4.00)	CFA	Feldspar, Quartz	Dolomite
RC-743 (4.00-5.00)	CFA	Feldspar, Quartz	—
RC-743 (5.00-5.70)	CFA	Feldspar, Quartz	Calcite

Major = >25%; Moderate = 5-25%; Minor = <5%
CFA = carbonate fluorapatite, the main phosphate mineral; Minerals are listed in decreasing abundance within categories
Source: Dr. James R. Hein, United States Geological Survey.

10.0 ITEM 12: EXPLORATION

Oceanica has relied upon the expertise, experience and equipment owned or leased by Odyssey during the exploration phase of the Don Diego Phosphorite Project. Odyssey is actively engaged in the marine exploration for mineral deposits and has an interest in concession positions for submerged massive sulfides, polymetallic nodules and phosphorites. Prior to the Don Diego Phosphate Project, Odyssey was retained by Chatham Rock Phosphates to conduct a mineral exploration sampling program at the Chatham Rise Phosphorite Deposit, offshore New Zealand.

All exploration work has been performed according to plans developed by the Project staff with integration of recommendations by Mineral Resource Associates for Legs 3 and 4. Shipboard exploration activities were supervised and managed by Odyssey personnel including independent contract geologists. The services listed in Table 10-1 were contracted.

TABLE 10-1 CONTRACTED SERVICES

Contractor	Service
Hays Ships Ltd.	M/V *Dorado Discovery,* Captain and crew
Gregg Drilling	Drilling equipment and staff
Florida Industrial and Phosphate Research Institute	Chemical and Metallurgical Laboratory and staff
Dr. Brian Parsons	Contract geologist

10.1 LITERATURE SEARCH AND ANALYSIS

Prior to identifying and mobilizing exploration assets to the Don Diego Mineral Concession, initial exploration for the Don Diego Phosphorite Deposit was based on a thorough literature search and analysis that anticipated the identification of an unbedded, fine-grained, sand phosphorite deposit commencing at the interstitial seabed layer. The most informative and significant literature sources were D'Anglejan (1965, 1967).

The literature investigation provided a basis for identifying approximate locations within the Don Diego Mineral Concession where high levels of phosphatic sediment were anticipated.

Publically available literature was primarily comprised of published and thesis level documents pertaining to a Scripps Oceanographic Institute scientific cruise taking place in the 1960s. Generalized information regarding the potential for the presence of phosphatic material off the Mexican Pacific coastline was additionally available in various published sources and is included in Section 21 of this report. Oceanographic assessment included examining circulation patterns, potential for upwelling and assessment of bathymetric and coastal morphology to determine if and where conditions were favorable for phosphatization and deposition. The presence of seaward bathymetric highs and anomalies contributed to the confidence that modern and relict phosphatization in association with various episodes of sea level rise and subsidence could exist. The possibility that defined periods of phosphatization and deposition could have occurred in the proposed survey area was supported by the dynamics of sea level low stand fluvial impact and transport of shoreward sediments, the potential for shoreward lagoonal phosphatization during intermediate sea level stands and higher sea level stands allowing for the induction of nutrient-rich upwelled water to a constricted bathymetric setting associated with dynamic current movement.

Based on literature assessment and oceanographic information, initial survey area parameters were identified and legal rights to the Don Diego Mineral Concession were secured.

10.2 EARLY EXPLORATION (LEGS 1 AND 2)

Conceptual investigation and surveying priorities remained dynamic during the early exploration stage. Correlating the bathymetric profile to establish a potential depositional trend formulated the foundation of preliminary survey priorities in Legs 1 and 2. Early exploration was a combined effort to locate marine phosphorites and to identify the most applicable exploration equipment. Multiple sampling techniques were tested and evaluated.

10.2.1 Leg 1

Initial on-site surveys were conducted from October 4 to November 4, 2012, and are referred to as "Leg 1". Activities consisted of ROV (Remote Operated Vehicle) deployment to observe seafloor conditions, Multibeam sonar surveys to determine bathymetry, and Piston Core drilling to obtain samples; all of which were performed from the deck of the M/V *Dorado Discovery*. Twinned coring occurred where two piston core samples on the order of one meter were collected at each sampling location. One core from each location was opened aboard ship for description by the geology team and the other core was labeled and stored for shipment, upon the conclusion of Leg 1 operations, to a third-party laboratory for analysis. Multibeam sonar mapping via a Reson 8160 ship-mounted multibeam provided a detailed bathymetric map. Analysis of isobathic levels, visual ROV inspection, and selected coring, guided the Project team to specific depths and areas where good core recovery and phosphatic content could be expected. The results of Leg 1determined the survey plan for a second cruise, "Leg 2". Upon the conclusion of Leg 1, one collected core from each geographic point was shipped to the Florida Industrial and Phosphate Research Institute (FIPR) located in Bartow, Florida.

Six priority areas were identified and mapped using the 8160 multibeam. Over eighteen hundred (1819.2) line kilometers were completed with a coverage of 458.2 km^2. A ROV was used to ground-truth the multibeam and to provide a reconnaissance sediment sample prior to coring. Twelve dives collected 40 seafloor sediments that were described onboard by the geology group. Seventy-seven sites were selected for piston coring where 155 cores were collected representing 102 meters. At each core location, twin cores were collected with one core being split and logged by the geology group, recorded using LogPlot software and the other core was labeled and archived for shipment to the FIPR laboratory. The piston corer did not provide sufficient penetration to gain a true understanding of the ore body.

The samples collected during Leg 1 were within the DD East Phosphorite Deposit, added to the understanding of the local geology but are not related to the DD West Phosphorite Deposit resource estimate.

Figure 10-1 shows the location of six priority areas with multibeam coverage and piston core locations. The purple shading is the high-priority area interpreted from D'Anglejan (1965).

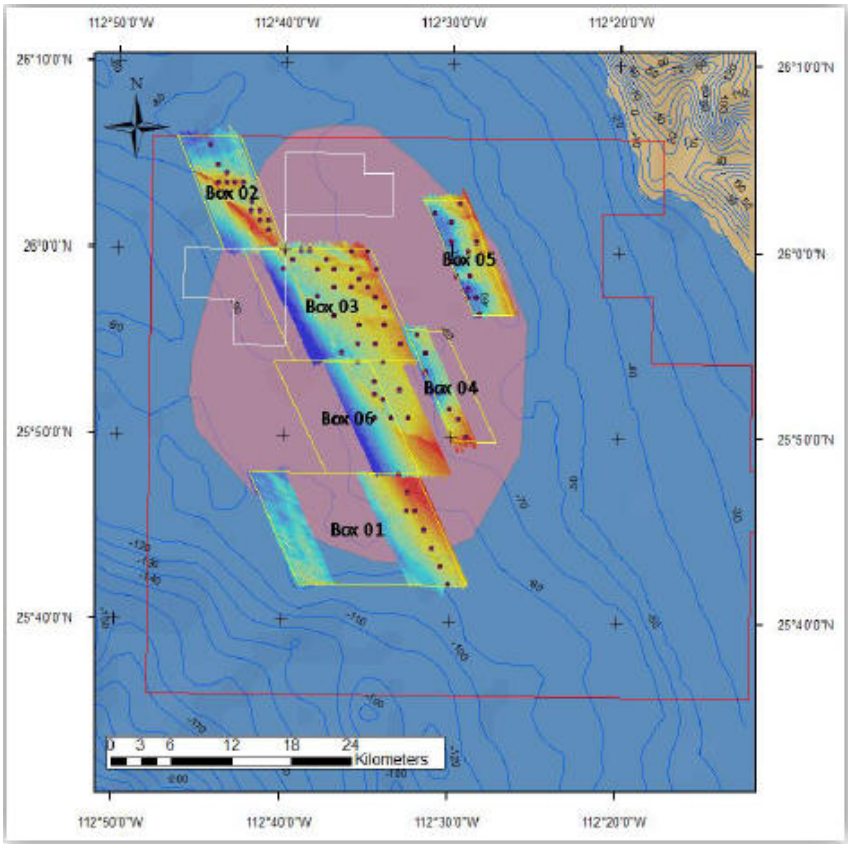

Figure 10-1 Leg 1 Summary Location Map

10.2.2 Leg 2

The Leg 2 objectives were to:

- Establish the lateral continuity of the hardbottom in the north-south direction as well as the east-west direction;
- Expand the spatial extent of sampling and insight into the deposit; and
- Define the vertical extent of the phosphorite.

The first phase of Leg 2 was executed from November 7 to 15, 2012. This segment was a continuation of Leg 1 focusing on additional multibeam benthic mapping and ROV ground-truthing of the expected seabed conditions as interpreted from the sonar data. The visual ROV inspection emphasized the “hardbottom” outcrop striking NW-SE through the Don Diego Mineral Concession as well as observing the in situ phosphorite sediment. Twin Piston Core sampling was directed by the Project staff at multiple sites and were processed in a manner similar to Leg 1.

Concurrent with Phase 1 of Leg 2, chemical analysis of the samples collected during Leg 1 commenced at FIPR. Analytical assays were delivered to the Project team routinely. Analysis of the 1-m piston cores included grab sampling and compositing from the bottom, top, and midpoint of each core. The sediment was dried, ground, digested and assayed for P_2O_5, Insol, Fe_2O_3, Al_2O_3, MgO and CaO.

Phase 2 of Leg 2 occurred from November 15 to December 7, 2012. Vibracoring equipment was utilized to undertake a 5-km, grid-spaced, coring campaign. Twenty-four (24) vibracore cores were collected at distinct geographic locations. On-board the cores were described, cut into 1-m sections, labeled and packed for shipment. Multibeam and ROV operations continued.

Upon conclusion of Leg 2, the undisturbed twin piston cores and vibracore samples were shipped to FIPR.

Concurrent with the Leg 2 operations and FIPR laboratory analysis, the Project engaged Henry Lamb of Mineral Resource Associates (MRA) as the Technical Advisor specializing in phosphate project development. On December 17, 2012, MRA provided initial findings from review of the FIPR ore assessment as well as findings from testing conducted by MRA. Initial laboratory analysis was positive and suggested that the phosphorite ore could be beneficiated to industry standards and that the Project had a potential for economic viability. This supported the need for additional sample collection followed by an organized procedure for chemical and metallurgical laboratory testing. A subsequent survey cruise, “Leg 3”, was planned where vibracoring would take place proximal to the trend within which maximum phosphorite core recovery was achieved in Leg 2 and then to proceed throughout the mineral concession on a 5-km N-S, E-W sampling grid.

During Leg 2, the M/V *Dorado Discovery* returned to San Diego to mobilize equipment (Alpine vibracore, One Pass Seafloor Drill and Rossfelder Vibracore) from Gregg Drilling that would improve efficiency and allow deeper continuous sampling as well as cover more geographical distance. Table 10-2 summarizes the relative success of drilling equipment and methodology.

TABLE 10-2 DRILLING SUMMARY FOR LEGS 1-3

Equipment	Drill Holes	Depth (meters) Average	Depth (meters) Maximum	Comments
Piston Core	183	0.65	1.80	2 attempts with no recovery
Gravity Core	1	0.20	0.20	6 attempts with no recovery
Alpine Vibracore				
One-Pass Seafloor Drill	11	1.72	3.00	1 attempt with no recovery
Rossfelder Vibracore	24	3.17	5.11	

Multibeam coverage mapped out the lateral extent of hardbottom outcrop as indicated by the black line in Figure 10-2. It became obvious that there were at least two distinct phosphorite deposits. One was the surficial (“shoal”; one meter or less) coarse grained shell layers with phosphorites found to the east of the hardbottom, and the second was the western, thicker, well-sorted black sands found a water depths of 70 to 90 meters. The second was ranked as the most promising to meet the target of at least 100 million tonnes of phosphate rock concentrate resources and is herein identified as the DD West Phosphorite Deposit.

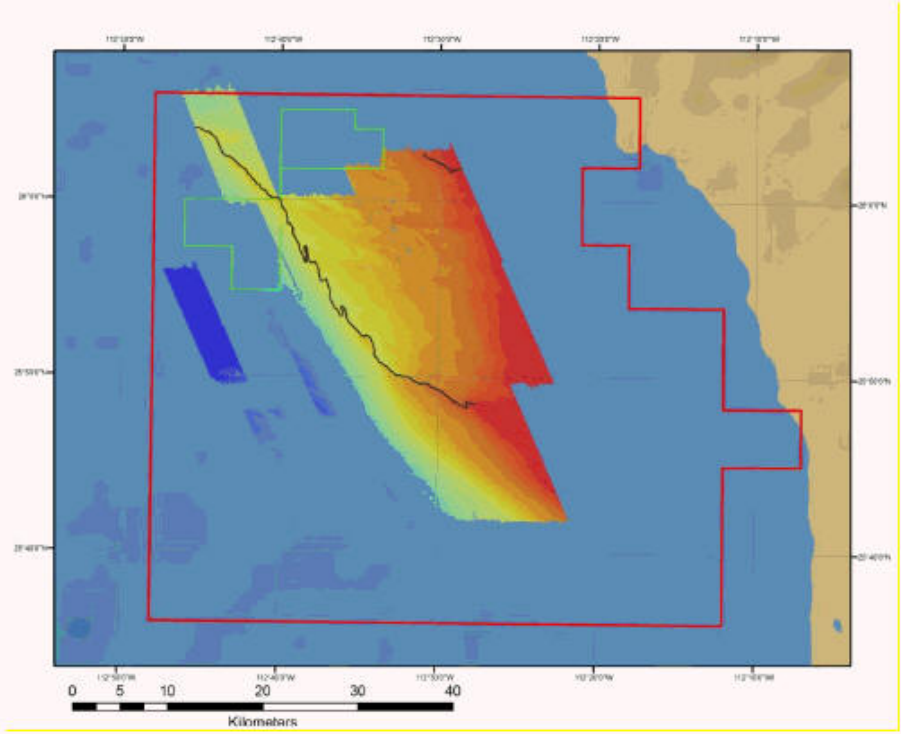

Figure 10-2 Legs 1 and 2 Multibeam Mapping of the Hardbottom (Black Line)

10.2.3 Leg 3

Success of the Rossfelder Vibracore test during Leg 2 greatly influenced the Leg 3 objectives:

- to complete a systematic vibracore drilling and sampling program based on a wide spaced, 5.0-km grid for the Don Diego Mineral Concession where the water depth was between 50 and 110 meters;
- to conduct a systematic vibracore drilling and sampling plan for a 2.5-km grid along the trend identified as the DD West Phosphorite Deposit along a northerly-southerly axis as well as an easterly-westerly transverse axis; and,
- to vibracore drill and sample at a 0.5-km interval transverse to the trend of the black sands in order to assess the vertical and horizontal extent of the Don Diego West Phosphorite Deposit.

Leg 3 operations were conducted aboard the M/V *Dorado Discovery* from January 6 to 30, 2013. During Leg 3, 138 Rossfelder Vibracore holes, ranging from 3.15 to 6 meters in depth, resulted in the collection of hundreds of core intervals for laboratory testing.

Based on observed and analyzed sediment samples plus the success of the Rossfelder Vibracore, a revised drilling pattern for Legs 3 and 4 was adopted to better define the phosphorite boundaries. The more constricted axial sampling pattern and a tightly spaced transaxial coring aided in defining the mineralization boundaries.

Conceptual investigation and surveying priorities remained dynamic. Correlating the bathymetric profile to establish a potential depositional trend defined the preliminary survey priorities. Based on core sample observations and laboratory test results, a more refined sampling pattern was adopted to

identify approximate boundaries of identified deposits given the limitations of sampling equipment. A more constricted axial sample collection pattern and a tightly space transaxial coring program were undertaken to better define geographic deposit boundaries.

Core samples collected during Leg 3 were shipped to FIPR. After completing Leg 3, plans for additional vibracoring in a subsequent cruise were outlined to incorporate additional transects of 0.5-km spaced drill holes, with a 2.5-km axial spacing between transects.

Concurrent to Leg 3, laboratory analysis of Leg 2 cores was on-going. The test results received early January were compelling and supportive of the vibracore drilling and sampling method. During this time, MRA was constructing, in collaboration with FIPR and the Project team, a laboratory procedure for ore characterization analysis for each core interval. Applying these procedures (see Appendix D), FIPR began assessment of select cores.

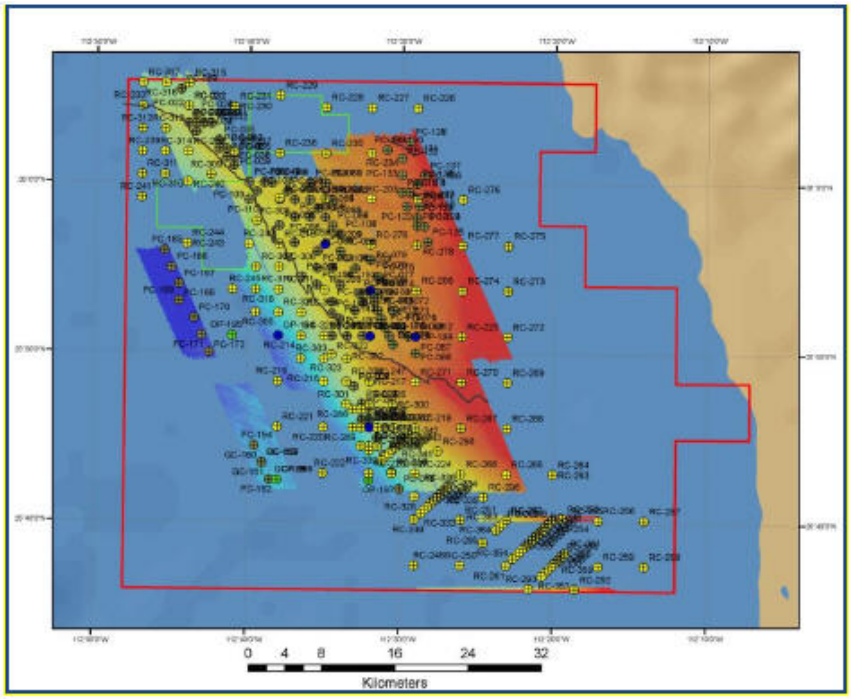

Figure 10-3 Core Locations for Legs 1, 2 and 3

10.2.4 Leg 4

Leg 4 was conducted from January 30 through March 6, 2013 aboard the M/V *Dorado Discovery*. Vibracore drilling sites at a 0.5-km interval were spaced perpendicular (transects) to the long axis of the deposit trend at a 2.5-km interval. Multibeam sonar data collection continued within the concession as well as in the water adjacent to the concession in order to more fully understand the deposit potential. Sediment samples from Leg 4 were shipped to FIPR.

Concurrent to Leg 4, size fraction analysis of preliminarily selected cores was conducted by FIPR under the terms of the approved procedures (Appendix D). Upon the conclusion of testing these select cores, additional cores acquired during Legs 2 and 3 operations were selected for testing using the same procedures.

Objectives for Leg 4 were to:

- continue to fill-in transects to define the DD West Phosphorite Deposit;
- fill in additional 5-km stations to the east of the hardbottom; and,
- survey northwest and southeast for potential tenement extensions.

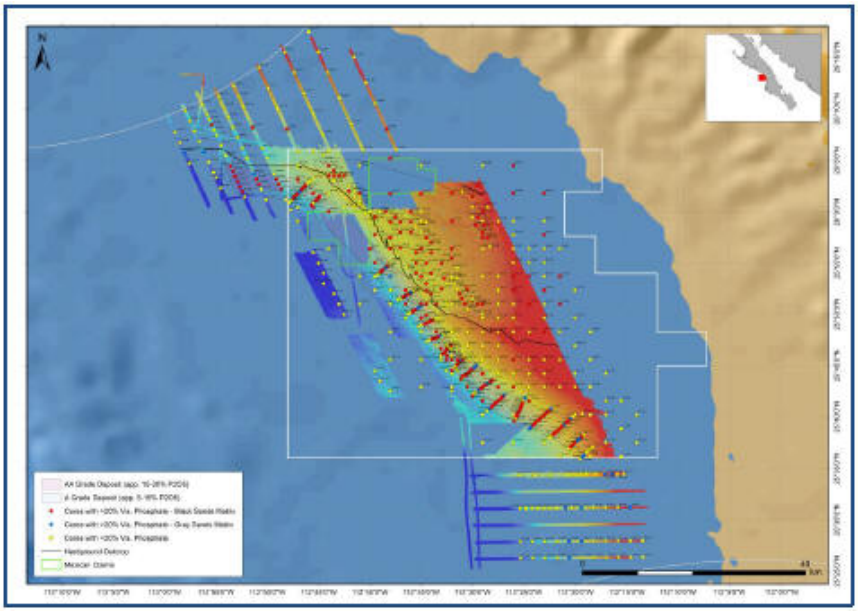

Figure 10-4 Multibeam and Coring Locations for Legs 1, 2, 3 and 4

Twenty 500-m spacing drill hole transects were conducted to establish the lateral extent of the Don Diego Phosphorite Deposit. Initial cores were collected in the central region with the vessel moving 500 meters to the NE until two cores were collected without a significant phosphorite intersection. The vessel returned to the central location and continued in a step out manner to the southeast collecting cores every 500 meters until two successive cores void of the phosphatic sands were recorded. The mineralized width as determined by visual inspection of the core ranged from 2.5 to 5.0 kilometers.

Cores were collected east of the hardbottom finishing out the 5.0-km grid pattern as well as 2.5-km infill cores.

11.0 ITEM 13: DRILLING

During the early exploration phase, the Project staff evaluated four core drilling units commonly applied in shallow and deep seafloor sampling projects including:

- Piston Core;
- Gravity Corer;
- One-Pass Drill; and,
- Rossfelder Vibracore.

This equipment was tested and evaluated resulting in the identification of system weaknesses and strengths. Issues of concern included core recovery, penetration depth, control of the drilling angle and operational control of the equipment.

None of the samples from the piston core, the gravity corer or the one-pass drill were used in the estimation of the resources. These instruments did not sufficiently penetrate the full thickness of the phosphorite deposit.

11.1 ROSSFELDER VIBRACORE

The Rossfelder underwater P-5 vibracorer is designed to obtain long, well-preserved cores in unconsolidated seabed sediments. Two electric vibrating motors combine with gravity to drive a 10.16-cm core barrel up to 6 meters into the seabed. The sediment sample is retained in a 9.75-cm inside diameter butyrate liner barrel. Motors and the core barrel are attached to a support guide and seabed frame. The assembly was deployed from the stern A-frame of the M/V *Dorado Discovery*. Upon recovery, the liner was removed; the core was described and processed for transport to a land based laboratory for analysis.

Figure 11-1 The Rossfelder Vibracore on the M/V *Dorado Discovery* Stern.

Good results were achieved using the Rossfelder Vibracore, with consistent recovery of hard clay and dense sand/silt material. Size and weight of the vibracore assembly allowed for relatively easy deployment and recovery. The Rossfelder Vibracore was provided by Seafloor Geotec LLC, a joint venture between Gregg Marine, Inc. and Fugro, who also provided an operating team of professional drillers and assistants.

The Rossfelder Vibracore was utilized initially to obtain core samples on a 5-km spacing to cover a broad geographic range before returning to port in December 2012. One vibracore sample per sampling location was collected. Due to the absence of a redundant core and to preserve core integrity, cores were not split and described on deck. The vibracore tubes, approximately six meters in length, were cut into 1-m sections for easier handling and shipment.

For shipboard geologic analysis including a descriptive baseline for core logging, scoop samples at the sectional cut points as well as on the top and bottom of the core were utilized. Descriptive results were entered into LogPlot data files. In previous operations all piston cores and one-pass cores were logged stratigraphically on a bed-scale; by contrast, the scoop samples collected where cores were cut using the vibracore are considered to be point-samples, and provided an important reference to describing the various sedimentary features. However, the scoop sample data entered into LogPlot and all LogPlot files from vibracores may not represent the continuous stratigraphic column. Point sampling the Rossfelder Vibracore cores allowed for qualitative analysis of phosphatic content for shipboard data sets and effective modification of the daily drilling plan. As with prior coring equipment, the greatest concentrations of phosphorites were observed proximal to the 80 and 90-m isobaths. Twenty-four vibracores were collected during the initial cruise in which the equipment was employed. The Rossfelder Vibracore recovery revealed visually high concentrations of phosphorite pellets in sandy beds.

11.2 DRILLING ATTITUDE

The DD West Phosphorite Deposit is a relatively flat-lying, marine sedimentary phosphorite that appears to be unimpacted by tectonic forces associated with fracturing, faulting and folding. Transverse cross-sections of the deposit indicate a low-angle dip to seaward (westward) that is measured in terms of two to four meters per kilometer.

The Rossfelder Vibracore drilling system was vertically stable. Given the low-angle dip of the phosphorite beds and the short length of the Rossfelder Vibracore core barrel (six meters), the Qualified Person believes that any difference in the relationship between the core length and the true thickness of the mineralization is not material in the estimation of phosphorite ore and phosphate rock concentrate resources.

11.3 FUTURE DRILLING PROCEDURES

Previous drilling efforts clearly demonstrated the superior performance of the Rossfelder Vibracore with respect to core recovery and penetration depth. Future drilling will utilize this equipment and methodology with the potential to extend the drilling depth, penetrate the phosphorite bed and the opportunity to terminate the core in underlying non-phosphatic material.

12.0 ITEM 14: SAMPLING METHOD AND APPROACH

12.1 DESCRIPTION OF SAMPLING METHODS

12.1.1 Piston Core and One-Pass Samples

For each location two piston cores were collected, one was archived while the other was split, photographed and described.

The one-pass core barrel did not have liners; therefore, the material was hydraulically extruded into a core tray. For each one-pass core, the core was photographed and described.

For both types of samples, visual descriptions used a 10-power hand lens and grain size card to determine grain size, sorting, roundness, presence of pelletal phosphorite, and shell fragment size. Colors were determined using Munsell soil color charts. Benthic infauna found within the samples were photographed, measured and identified. The archived core liner was capped and secured on both ends and labeled with appropriate identification. The archived piston core tubes, containing the undisturbed samples, were stored until returning to port (San Diego, California) where the samples were securely packaged, with a chain of custody identifying the contents of each package, and shipped by a commercial carrier to the Florida Industrial and Phosphate Research Institute (FIPR) laboratory in Bartow, Florida.

12.1.2 Rossfelder Core Samples

Due to the recovery length, the Rossfelder core liners, containing the recovered samples, were cut into 1.0 to 1.2-m sections and point sampled. Visual descriptions used a 10-power hand lens and grain size card to determine grain size, sorting, roundness, presence of pelletal phosphorite, and shell fragment size. Colors were determined using Munsell soil color charts. Benthic infauna found within the samples were photographed, measured and identified. The 1-m core liner sections were capped and secured on both ends, labeled with appropriate identifiers, and shipped by a commercial carrier to the FIPR laboratory.

Only the samples from the Rossfelder Vibracore were used in the preparation of the DD West Phosphorite Deposit resource estimate.

12.1.3 ROV Samples

Visual descriptions used a 10-power hand lens and grain size card to determine grain size, sorting, roundness, presence of pelletal phosphorite, and shell fragment size. Colors were determined using a Munsell soil color charts. Any benthic infauna found within the samples were photographed, measured and identified. No ROV samples were archived.

12.2 DRILLING, SAMPLING, AND RECOVERY FACTORS

The Rossfelder Vibracore was the best drilling technology for coring and sampling the Don Diego Phosphorite Deposits and achieved good penetration given the core barrel length and resulted in maximum recovery. There is minimal indication of material core loss. The core barrel liner and core catcher preserved the integrity of the sample during extraction, storage and transportation to the laboratory. The limitation was the 6-m core barrel length in a deposit that shows evidence that the total thickness of the phosphorite bed may not have been fully penetrated and sampled. Consequently, the maximum thickness of the phosphorite layer has not been determined at many drill sites.

12.3 SAMPLE QUALITY

The samples from the piston and one-pass coring programs have been used to understand the local geologic environment and ore characteristics of the phosphorites within the overall concession area.

The sample quality of the Rossfelder Vibracore is superior to the tested alternatives with respect to penetration of the phosphorite bed, protection of the core during drilling, extraction, and core protection during storage and transportation to the FIPR laboratory. Only the results from the Rossfelder Vibracore drilling program that have been included in the estimating the phosphate rock resources of the DD West Phosphorite Deposit.

12.4 GEOLOGIC CONTROLS FOR SAMPLING

An understanding of the NW-SE trend along the upper continental shelf containing the DD West Phosphorite Deposit and its general geographic relationship to the “hardbottom” zone provided guidance for locating drill holes during Legs 3 and 4.

With some exceptions, the Rossfelder Vibracore core was sampled in 1-m sections starting at the seafloor surface and extending downward. The primary exception was where the lowermost interval of the core was less than 0.5-meters and was included in the overlying section thus creating a longer than normal sample interval. Similarly, shorter than normal sample intervals occurred when the lowermost section was longer than 0.5-meters and was thus sampled separately. In a few cases, it appears that the site geologist selected samples based on physical features of the core such as color, texture, moisture or pelletal phosphorite content. This resulted in more samples per drill core but significantly reduced the material available for laboratory testing.

It is the conclusion of the Qualified Person that there is no material advantage to stratigraphic sampling. The consequence of core samples less than 1-m in length is that there would be an insufficient phosphorite for ore characterization, physical testing, and bench scale mineral beneficiation process testing. Similarly, the geologic concern that a 1-m sample may mask the upper or lower phosphorite contact, is not material as such imperfections will tend to simulate dredge performance with respect to phosphorite ore dilution. The Qualified Person also recognizes that the phosphorite ore is not a directly sellable product and must be processed through a mineral beneficiation plant capable of receiving and processing a range of ore grades in order to achieve a marketable product.

12.5 SUMMARY OF RELEVANT SAMPLES AND COMPOSITES

Table 13-1 is a listing of the relevant samples used in the preparation of this Technical Report.

13.0 ITEM 15: SAMPLE PREPARATION, ANALYSES AND SECURITY

13.1 SAMPLE PREPARATION

Core samples from the four drilling Legs were labeled, packaged, offloaded and shipped by a commercial carrier or were driven by Project personnel from San Diego, California to the laboratory at the Florida Industrial and Phosphate Research Institute (FIPR) in Bartow, Florida. Upon arrival the packages were opened, the contents were checked against the manifest and the core tubes were photographed.

13.2 ANALYSIS - PISTON CORE SAMPLES

The core tube samples from Legs 1 and 2 were sampled by compositing a portion from each end of the core tube, cutting the tube approximately in half and adding a portion from the middle of the core to the end portions. Testing was limited to ore assays for P_2O_5, SiO_2, Fe_2O_3, Al_2O_3, MgO and CaO. No physical tests were performed. All samples were prepared and assayed by FIPR.

13.3 ANALYSIS - ROSSFELDER VIBRACORE SAMPLES

13.3.1 Chemical Analyses

The sample and test procedures discussed in this subsection were applied to the Leg 2, 3, and 4 core vibracore samples.

As on June 30, 2014, 761 sample intervals from 199 drill holes have been tested for Ore Characteristics and Ore Chemical Analysis. Two-holes (OP-192 and RC-284), were duplicated and both holes were removed from the resource database. The database drill holes and sample intervals are listed in Table 13-1. Beginning chronologically with RC-364 (1.78-2.78) the size distribution intervals were modified with the -65+100 mesh and -100+150 mesh intervals being consolidated into a single -65+150 mesh interval. Likewise, the bottom interval was redefined for -270 mesh to -200 mesh. These changes were based on the results from multiple tests that revealed no significant impact on the data quality for resource estimation.

13.3.2 Ore Characterization

Ore characterization of an unconsolidated marine phosphorite is an important first step to understanding the mineral beneficiation options and factors effecting mine and plant design. The principal factors are determination of the ore in-situ bulk density, the ore moisture, and the ore size distribution. Mineral Resource Associates (MRA) provided a Proposed Laboratory Procedure that in consultation with the Project team and FIPR was modified and approved. A copy of the final procedure is included as Appendix D. All samples were prepared and characterized by tests performed at FIPR.

13.3.2.1 Bulk Density

Determining the bulk density of a sediment is, at best, a difficult procedure. Several methods have been applied in the phosphate industry with the most basic being the “packing” of a known volume container with the loose sediment. This method has been applied to each sample interval (strata) within each hole. The calculation of phosphorite ore tonnage for each strata employed the specific strata bulk density.

As of June 30, 2014, the Bulk Density Procedure specified in Appendix D has been applied to 582 samples that were used in the resource estimate. The resulting values range from 0.51 to 2.00 tonnes per cubic meter and the arithmetic average is 1.39 tonnes per cubic meter (86.6 pounds per cubic foot) with a standard deviation of ±0.25 tonnes per cubic meter. These results are similar to the results of bulk density tests for other unconsolidated marine phosphorite deposits around the world. All bulk density samples were prepared and tested by FIPR.

TABLE 13-1 LISTING OF HOLES AND SAMPLE INTERVALS DEFINING THE DON DIEGO WEST PHOSPHORITE DEPOSIT

Hole ID	Number of Samples	Sample Intervals							
RC-208	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-5.67		
RC-209	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.79			
RC-211	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.32				
RC-214	2	0.0-1.0	1.0-2.05						
RC-218	6	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-5.7		
RC-224	6	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-5.7		
RC-240	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.6			
RC-242	3	0.0-1.0	1.0-2.0	2.0-2.8					
RC-246	3	0.0-1.0	1.0-2.0	2.0-2.28					
RC-251	3	0.0-1.0	1.0-2.0	2.0-2.65					
RC-260	6	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-5.44		
RC-262	3	0.0-1.0	1.0-2.0	2.0-2.63					
RC-280	2	0.0-1.0	1.0-2.12						
RC-281	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.8				
RC-282	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0				
RC-283	3	0.0-1.0	1.0-2.0	2.0-3.04					
RC-285	3	0.0-1.0	1.0-2.0	2.0-2.88					
RC-286	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.16				
RC-287	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.19				
RC-288	6	0.0-0.75	0.75-1.75	1.75-2.75	2.75-3.75	3.75-4.75	4.75-5.07		
RC-290	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.8				
RC-291	3	0.0-1.0	1.0-2.0	2.0-2.95					
RC-292	5	0.0-1.0	1.0-1.9	2.1-3.0	3.0-4.0	4.0-5.1			
RC-294	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.8			
RC-295	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.48				
RC-297	5	0.0-1.0	1.0-1.94	1.94-3.0	3.0-4.0	4.0-4.88			
RC-299	4	0.0-1.12	1.12-2.0	2.0-3.0	3.0-4.13				
RC-301	2	0.0-1.0	1.0-1.45						
RC-307	4	0.0-1.0	1.0-2.2	2.2-3.0	3.0-3.81				
RC-308	2	0.0-1.0	1.0-1.6						
RC-310	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0				
RC-312	4	0.0-0.76.0	0.76-1.0	1.0-2.0	2.0-3.15				
RC-314	5	0.0-1.1	1.1-2.0	2.0-3.0	3.0-4.0	4.0-5.2			
RC-321	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.66			
RC-322	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.07				
RC-323	3	0.0-1.17	1.17-2.19	2.19-2.52					
RC-324	6	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-6.0		
RC-325	5	0.0-1.1	1.1-2.24	2.24-3.0	3.0-4.0	4.0-5.12			
RC-328	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.13				
RC-329	8	0.0-1.0	1.0-1.65	1.65-2.0	2.0-3.0	3.0-3.65	3.65-4.0	4.0-5.0	5.0-6.0
RC-330	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.3			
RC-331	5	0.0-1.0	1.0-2.0	2.0-2.41	2.5-3.5	3.5-4.59			
RC-332	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.41			
RC-333	6	0.0-1.0	1.0-2.0	2.0-2.65	2.65-3.0	3.0-4.0	4.0-4.32		
RC-334	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.7			
RC-335	6	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-5.75		
RC-336	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.51			
RC-337	4	0.0-1.0	1.0-2.0	2.0-3.0	3.2-4.12				
RC-338	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.95				
RC-339	2	0.0-1.0	1.0-2.14						

Table 13-1 Listing of Holes and Sample Intervals Defining the Don Diego West Phosphorite Deposit

Hole ID	Number of Samples	Sample Intervals							
RC-340	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.68				
RC-341	6	0.0-0.68	0.68-1.36	1.36-2.36	2.36-3.36	3.36-4.36	4.36-4.89		
RC-342	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.55			
RC-343	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.57				
RC-344	5	0.0-1.14	1.14-2.28	2.28-3.2	3.4-4.4	4.4-5.0			
RC-345	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.69			
RC-346	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.9			
RC-347	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.39			
RC-347	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.2				
RC-350	6	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-5.35		
RC-351	6	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-5.55		
RC-352	6	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-5.59		
RC-353	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.4			
RC-355	6	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-5.5		
RC-356	6	0.0-1.0	1.0-1.73	1.73-2.8	2.8-3.6	3.6-4.6	4.6-5.5		
RC-357	3	0.0-1.0	1.0-2.0	2.0-3.0					
RC-358	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0				
RC-359	6	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-5.71		
RC-360	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.6			
RC-361	6	0.0-0.73	0.73-1.39	1.39-2.39	2.39-3.39	3.39-4.39	4.39-5.39		
RC-362	7	0.0-0.37	0.37-1.0	1.0-1.88	1.88-2.35	2.35-3.35	3.35-4.27	4.27-5.16	
RC-363	8	0.0-0.8	0.8-1.54	1.54-1.94	1.94-2.73	2.73-3.28	3.28-3.85	3.85-4.64	4.64-5.56
RC-364	7	0.0-0.78	0.78-1.78	1.78-2.78	2.78-3.78	3.78-4.14	4.14-4.88	4.88-5.86	
RC-366	3	0.0-1.2	1.2-2.4	2.4-3.55					
RC-367	4	0.0-1.2	1.2-2.4	2.4-3.4	3.4-4.24				
RC-370	5	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.8	4.8-5.73			
RC-371	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.76				
RC-372	3	0.0-1.0	1.0-2.0	2.0-2.82					
RC-373	4	0.0-1.2	1.2-2.4	2.4-3.4	3.4-4.33				
RC-374	5	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.8	4.8-5.37			
RC-378	2	0.0-1.2	1.2-2.0						
RC-383	2	0.0-1.2	1.2-2.4						
RC-384	3	0.0-1.0	1.0-2.0	2.0-2.58					
RC-379	5	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.8	4.8-6.0			
RC-380	4	0.0-1.2	1.2-2.4	2.4-3.5	3.5-4.53				
RC-381	5	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.3	4.3-4.97			
RC-383	2	0.0-1.2	1.2-2.4						
RC-384	3	0.0-1.0	1.0-2.0	2.0-2.58					
RC-394	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.34				
RC-395	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.51				
RC-396	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.1				
RC-397	3	0.0-1.0	1.0-2.0	2.0-2.84					
RC-398	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.6				
RC-400	3	0.0-1.0	1.0-2.0	2.0-2.58					
RC-401	2	0.0-1.0	1.0-1.64						
RC-414	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.44				
RC-415	3	0.0-1.0	1.0-2.0	2.0-2.9					
RC-418	3	0.0-1.2	1.2-2.4	2.4-3.21					
RC-419	4	0.0-1.1	1.27-2.4	2.4-3.6	3.6-4.57				
RC-420	4	0.0-1.2	1.2-2.4	2.4-3.4	3.4-3.97				

Table 13-1 Listing of Holes and Sample Intervals Defining the Don Diego West Phosphorite Deposit

Hole ID	Number of Samples	Sample Intervals				
RC-421	2	0.0-1.0	1.0-1.85			
RC-422	2	0.0-1.0	1.0-1.61			
RC-423	3	0.0-1.2	1.2-2.2	2.2-2.54		
RC-424	3	0.0-1.2	1.2-2.4	2.4-3.6		
RC-425	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.9	
RC-426	3	0.0-1.2	1.2-2.4	2.4-3.58		
RC-427	2	0.0-1.0	1.0-1.93			
RC-428	2	0.0-1.2	1.2-2.4			
RC-429	2	0.0-1.2	1.2-2.37			
RC-430	2	0.0-1.2	1.2-2.4			
RC-431	1	0.0-1.2				
RC-432	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.71	
RC-434	3	0.0-1.0	1.0-2.0	2.0-2.83		
RC-435	3	0.0-1.0	1.0-2.0	2.0-2.8		
RC-436	3	0.0-1.2	1.2-2.4	2.4-3.6		
RC-437	2	0.0-1.2	1.2-2.4			
RC-438	2	0.0-1.1	1.1-2.0			
RC-439	2	0.0-1.2	1.2-2.4			
RC-440	3	0.0-1.0	1.0-2.0	2.0-3.02		
RC-441	3	0.0-1.0	1.0-2.0	2.0-2.7		
RC-442	2	0.0-1.0	1.0-2.02			
RC-443	3	0.0-1.0	1.0-2.0	2.0-2.94		
RC-444	2	0.0-1.0	1.0-2.0			
RC-445	3	0.0-1.0	1.0-2.0	2.0-2.6		
RC-447	3	0.0-1.2	1.2-2.4	2.4-3.6		
RC-448	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.33	
RC-449	3	0.0-1.0	1.0-2.0	2.0-3.02		
RC-451	4	0.0-1.2	1.2-2.4	2.4-3.4	3.4-4.14	
RC-452	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.63	
RC-453	3	0.0-1.2	1.2-2.4	2.4-3.56		
RC-455	5	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.6	4.6-5.23
RC-456	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.2
RC-457	3	0.0-1.0	1.0-2.0	2.0-2.98		
RC-458	5	0.0-1.0	1.0-1.94	1.94-3.0	3.0-4.0	4.0-5.16
RC-459	4	0.0-1.04	1.04-2.2	2.2-3.4	3.4-4.61	
RC-460	5	0.0-1.13	1.13-2.0	2.0-3.0	3.0-4.0	4.0-5.02
RC-461	5	0.0-1.0	1.0-2.07	2.07-3.0	3.0-4.0	4.0-5.0
RC-462	3	1.2-2.4	2.4-3.6	3.6-4.8		
RC-463	3	1.0-2.2	2.2-3.4	3.4-4.63		
RC-464		0.0-1.0	1.0-2.23	2.23-3.0	3.0-4.0	4.0-4.77
RC-515	3	0.0-1.2	1.2-2.4	2.4-3.52		
RC-516	4	0.0-1.2	1.2-2.4	2.4-3.4	3.4-4.27	
RC-517	3	0.0-1.2	1.2-2.4	2.4-3.55		
RC-519	2	0.0-1.0	1.0-1.97			
RC-533	3	0.0-1.2	1.2-2.4	2.4-3.61		
RC-534	2	0.0-1.0	1.0-1.86			
RC-535	4	0.0-1.2	1.2-2.4	2.4-3.4	3.4-4.14	
RC-536	1	0.0-1.2				
RC-538	5	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.8	4.8-5.41
RC-539	3	0.0-1.0	1.0-2.0	2.0-3.04		

Table 13-1 Listing of Holes and Sample Intervals Defining the Don Diego West Phosphorite Deposit

Hole ID	Number of Samples	Sample Intervals					
RC-540	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.96		
RC-542	2	0.0-1.0	1.0-1.94				
RC-543	3	0.0-1.2	1.2-2.4	2.4-3.24			
RC-545	3	0.0-1.0	1.0-2.0	2.0-2.83			
RC-546	2	0.0-1.2	1.2-2.13				
RC-562	2	0.0-1.0	1.0-1.8				
RC-563	3	0.0-1.2	1.2-2.2	2.2-3.19			
RC-590	5	0.0-0.75	0.75-1.95	1.95-2.95	2.95-3.95	3.95-4.9	
RC-591	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.75		
RC-593	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.65		
RC-594	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.63		
RC-595	3	0.0-1.2	1.2-2.4	2.4-3.61			
RC-596	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.83		
RC-598	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.8		
RC-600	3	0.0-1.2	1.2-2.4	2.4-3.45			
RC-601	4	0.0-1.2	1.2-2.4	2.4-3.6	3.6-4.8		
RC-603	3	0.0-1.2	1.2-2.2	2.2-3.1			
RC-604	3	0.0-1.2	1.2-2.4	2.4-3.45			
RC-728	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.9		
RC-729	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0		
RC-730	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0		
RC-732	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.6		
RC-733	3	0.0-1.0	1.0-2.0	2.0-2.5			
RC-734	3	0.0-1.0	1.0-2.0	2.0-2.5			
RC-736	1	0.0-1.0					
RC-737	3	0.0-1.0	1.0-2.0	2.0-3.0			
RC-738	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0		
RC-739	3	0.0-1.0	1.0-2.0	2.0-3.0			
RC-740	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	
RC-741	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.7		
RC-742	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.7		
RC-743	6	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	5.0-5.7
RC-744	1	0.0-1.0					
RC-745	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.6	
RC-746	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.5	
RC-747	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.9	
RC-748	1	0.0-1.0					
RC-749	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.9		
RC-750	1	0.0-1.0					
RC-751	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	
RC-753	1	0.0-0.7					
RC-754	1	0.0-1.0					
RC-755	1	0.0-1.0					
RC-757	1	0.0-0.5					
RC-758	2	0.0-1.0	1.0-1.7				
RC-759	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0		
RC-761	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.6		
RC-763	3	0.0-1.0	1.0-2.0	2.0-3.0			
RC-764	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0	
RC-766	3	0.0-1.0	1.0-2.0	2.0-2.7			
RC-767	3	0.0-1.0	1.0-2.0	2.0-2.9			

Table 13-1 Listing of Holes and Sample Intervals Defining the Don Diego West Phosphorite Deposit

Hole ID	Number of Samples	Sample Intervals				
RC-768	3	0.0-1.0	1.0-2.0	2.0-3.0		
RC-769	3	0.0-1.0	1.0-2.0	2.0-2.6		
RC-770	3	0.0-1.0	1.0-2.0	2.0-3.0		
RC-771	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-5.0
RC-772	5	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	4.0-4.7
RC-773	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-4.0	
RC-734	1	0.0-1.0				
RC-775	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.6	
RC-776	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.8	
RC-780	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.6	
RC-781	3	0.0-1.0	1.0-2.0	2.0-2.7		
RC-782	3	0.0-1.0	1.0-2.0	2.0-3.0		
RC-783	4	0.0-1.0	1.0-2.0	2.0-3.0	3.0-3.5	
RC-784	3	0.0-1.0	1.0-2.0	2.0-2.5		
RC-785	3	0.0-1.0	1.0-2.0	2.0-2.71		

13.3.2.2 Moisture Content

An ore moisture test was performed on each sampled interval. Being seafloor and near seafloor, unconsolidated samples, it is anticipated that the samples are fully saturated and that any contained clay minerals are near their saturation limit. The moisture test procedures are reported in Appendix D.

The average moisture content for the 582 tests is 25.94% with a standard deviation of ±7.09%. The moisture contents for individual samples range from 14.91% to 57.72%. The conversion of the wet bulk density to dry bulk density for each strata incorporates the corresponding percent moisture for that strata.

Appendix E contains a listing of the drill holes, sample intervals, wet density, percent moisture and dry density of the available 582 samples as of June 30, 2014. All moisture samples were prepared and tested by FIPR.

13.3.2.3 Particle Size Distribution

For loose, unconsolidated phosphorite deposits laboratory testing to determine the particles size distribution coupled with chemical analysis of each size fraction is a simple and rapid method to determine if there is a natural concentration of pelletal phosphate grains and what further steps may be appropriate for mineral beneficiation.

Using the procedures defined in Appendix D, a subsample of the blended material from each sample interval was collected, wet screened at a standard set of screen sizes, dried, weighed and chemically analyzed for P_2O_5, SiO_2, Fe_2O_3, Al_2O_3, MgO and CaO as well as being examined under a binocular microscope. Each subsamples was sized according to the particle sized listed in Table 13-2. All particle size distribution samples were prepared and tested by FIPR.

TABLE 13-2 CHEMICAL ANALYSES FOR ORE CHARACTERIZATION

Component		P_2O_5	Insol	Fe_2O_3	Al_2O3	MgO	CaO
Ore Head Assay		X	X	X	X	X	X
Tyler Mesh	Microns						
+20	+833	X	X	X	X	X	X
28	589	X	X	X	X	X	X
35	417	X	X	X	X	X	X
48	295	X	X	X	X	X	X
65	208	X	X	X	X	X	X
100[1]	147	X	X	X	X	X	X
150	104	X	X	X	X	X	X
200	74	X	X	X	X	X	X
270[1]	53	X	X	X	X	X	X
-270[1]	-53	X	X	X	X	X	X

Note 1: During the testing program, the size distribution procedures were modified to combine the -65+100 and -100+150 size fractions into a single -65+150 fraction. Likewise, the -200+270 size fraction was eliminated and the bottom size became -200 mesh.

This exercise resulted in the following observations:

- Generally, the unconsolidated ore can be divided into three components:
  - Coarse waste is +0.853 millimeters in size and consists mainly of sea shells and shell fragments;
  - The phosphatic flotation feed being between -0.853 and +0.104 millimeters is dominated by an abundance of pelletal phosphorite grains with more sea shell fragments in the coarser size and in the fine fraction a higher content of quartz grains being related to a higher SiO_2 content; and
  - The fine fraction being less than 0.104 millimeters in size is dominated by high silica indicating quartz as the dominate mineral and a varying quantity of clay minerals;
- The size distribution data implies that the coarse fraction with its low phosphorus and high CaO contents can be easily separated as a waste product and that the fine fraction being mainly quartz with very minor phosphorus is also an easily separated waste product; and,
- The -0.853 to +0.104 millimeter fraction with its enrichment in pelletal phosphorites becomes the material with a higher economic potential.

13.3.3 Chemical Analysis

Chemical analysis of the phosphorite ore and size distribution samples has been extensive. Table 13-2 summaries the assaying. All analyses were performed by FIPR using the procedures established by the Association of Fertilizer and Phosphate Chemists (AFPC).

The results of the ore characterization chemical analyses as reported by FIPR are listed in Appendix F. All chemical analysis samples were prepared and assayed by FIPR.

13.3.4 Amine Flotation Tests

Flotation tests indicate that after proper sizing to remove the +20 and the -150 mesh fractions of the ore that the resulting -20+150 mesh flotation feed will be upgraded to 18% to 25% P_2O_5 and suitable

for a simple amine reverse flotation to remove the majority of the remaining quartz and yield a 28% to 32% P_2O_5 phosphate rock concentrate product. The target concentrate grade is 30% P_2O_5. Ninety (90) flotation tests have been completed successfully on broad geographic and stratigraphic range of samples. Amine concentrate grades ranged from under 20% P_2O_5 to 32.5% P_2O_5. After amine flotation the principal contaminant in the amine concentrate is shell fragments indicating in a high CaO content and a high CaO/P_2O_5 ratio.

To achieve the target grade in some samples it may be necessary to separate the sea shell fragments from the flotation concentrate using a gravity separation method such as cycloning, hydrosizing or spiraling. Another option is a calcite flotation. ArrMaz, a reagent supplier, is developing two-stage, reagent application process that shows promise for the separation of both silica and carbonates in a single flotation stage. This process has not been tested on the Don Diego West flotation feed. The process has been tested on other phosphorite ores.

All flotation test samples were prepared by FIPR and delivered to Ed Finch & Associates for flotation testing under the direction of Mr. Ed Finch. Samples of the concentrate and tailings were returned to FIPR for assaying.

13.3.5 Gravity Separation Tests

The gravity separation tests were performed at the Oregon Mineral Laboratory under the observation and at the direction of Mr. Ed Finch. These tests included heavy media separation, tabling and spiraling with the test results being less than anticipated with respect to a significant increase in the phosphate rock concentrate % P_2O_5 and a corresponding reduction in CaO.

13.4 SAMPLE SECURITY

The sample security has been maintained by the Project and FIPR staffs. A Chain-of-Custody record has been maintained.

13.5 QP STATEMENT

The QP believes that the sample preparation, security and analytical procedures are adequate and conform to industry standards. A sufficient number of check, blank and duplicate samples have been included in the program.

The flotation tests were limited to conditioning with an amine solution because the development plan was to be limited to shipboard mineral processing and amine solutions are more environmentally friendly. Given that the product P_2O_5 content can be improved by the removal of the shell fragments and the gravity separation tests were not a successful as desired, the ArrMaz process for dual conditioning (amine and fatty acid solutions) for a single float may have merit and should be tested on a range of flotation feed grades.

14.0 ITEM 16: DATA VERIFICATION

14.1 QUALITY CONTROL AND DATA VERIFICATION

Quality Control for the analytical samples was accomplished using a system of sample duplicates, blanks and industry standards. FIPR followed the established procedures of the AFPC or other analytical procedures accepted by the phosphate industry.

The analytical laboratory at FIPR performed its internal QC checks and balances.

Sample duplicates were prepared and assayed for most of the ore samples, several of the particle size distribution samples and all of the flotation concentrate samples for each sampled interval.

14.2 VERIFICATION BY THE QUALIFIED PERSON

14.2.1 PhysicalData

Verification of the raw laboratory data for physical testing of the ore moisture and bulk density was accomplished by calculating the moisture and bulk density and comparing the results to expected results based on the geologic description from the drill logs and statistical comparison to other measured variables such as the particle size distribution.

Data analysis of the bulk density and the particle size distribution revealed a relatively strong correlation with the fine waste (-0.104 millimeter) ore fraction weight. For the 415 paired tests, the correlation coefficient was 0.6610 and indicated a moderate to strong inverse relationship between the ore bulk density and the dry weight of the fine waste.

Figure 14-1 illustrates the bulk density versus fine side fraction relationship.

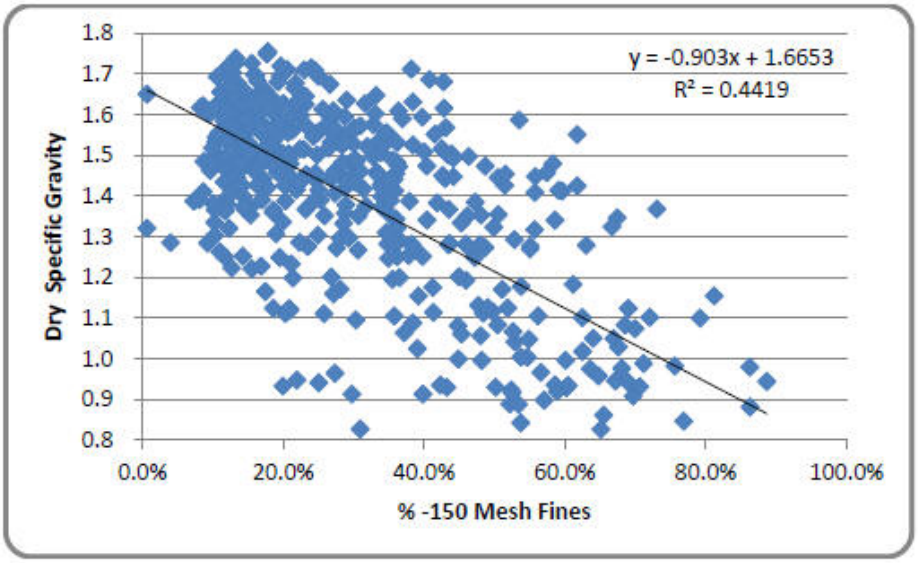

Figure 14-1 Correlation between the Ore Bulk Density and the Fine Waste Size Fraction of the Don Diego West Phosphorite Ore

Using the same samples, a moderate direct correlation coefficient (0.5630) was identified between the flotation feed size fraction (-0.853 + 0.104 millimeters) and is illustrated in Figure 14-2.

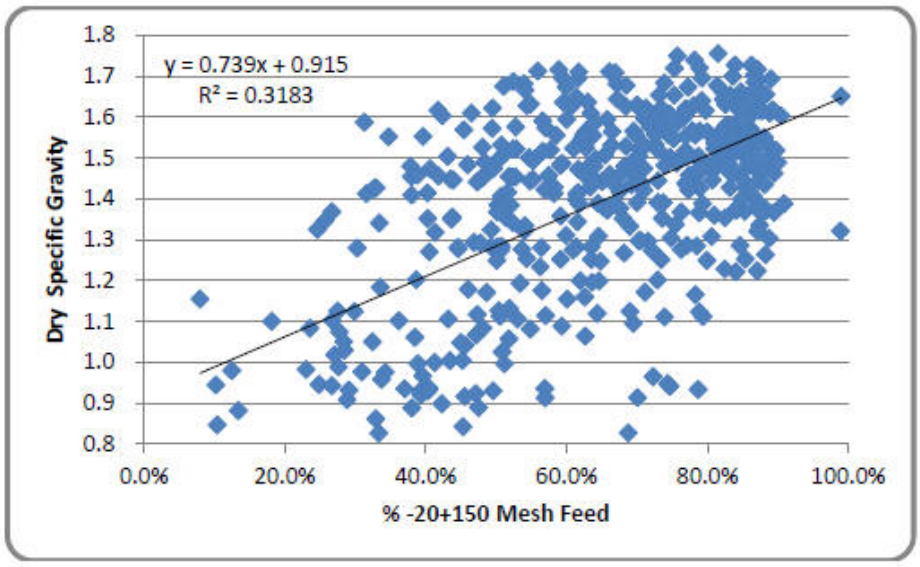

Figure 14-2 Correlation between the Ore Bulk Density and the Flotation Feed Size Fraction of the Don Diego West Phosphorite Ore

The QP has concluded that the procedure for determining the bulk density for each sample interval is effective and shows a reasonable correlation with other physical variables associated with ore particle sizes.

14.2.2 Chemical Data

The QP verified the laboratory data through a series of range tests to confirm that each chemical component was reported within an anticipated range of value. Those values outside the normal range were re-assayed, the original data was re-evaluated or the data transfer was checked for accuracy. Out-of-range values were rare and are estimated at less than 0.1% of the assays.

Additional analytical checks included the calculation of certain ratios commonly used in the phosphate industry including the CaO/P_2O_5 ratio and the Minor Element Ratio (MER). If these ratios were outside the normal range, then a more detailed inspection of the analytical results was applied.

As of June 30, 2014, the FIPR laboratory processed 199 drill holes containing 471 sampled intervals (strata) with 125 duplicate head assay samples and 325 duplicate size fractions for the size distribution analysis. Each original and duplicate sample was analyzed for P_2O_5, Insol, Fe_2O_3, Al_2O_3, MgO and CaO. In all cases, the correlation coefficient between the original and duplicate assays for each compound was greater than r = 0.99. The database contains an obvious outlier associated with the RC-209 (0.00-1.00) duplicate. The data transfer is being rechecked. One duplicate sample was prepared and assayed for each core interval for which a size distribution analysis was performed. Table 14-1 provides a summary of the correlations and Appendix G includes the detailed data and comparative charts. Figure 14-3 illustrates the strong linear relationship between the ore head original and duplicate P_2O_5 assays. Comparison plots for the other compounds are found in Appendix G and also show strong linear relationships.

The duplicate sampling and assaying indicates that the laboratory assays are reliable and reproducible.

TABLE 14-1 DUPLICATE SAMPLE ASSAYS

Compound	Correlation Coefficient (r)
P_2O_5	0.9993
Insol	0.9997
Fe_2O_3	0.9976
Al_2O_3	0.9978
MgO	0.9917
CaO	0.9985

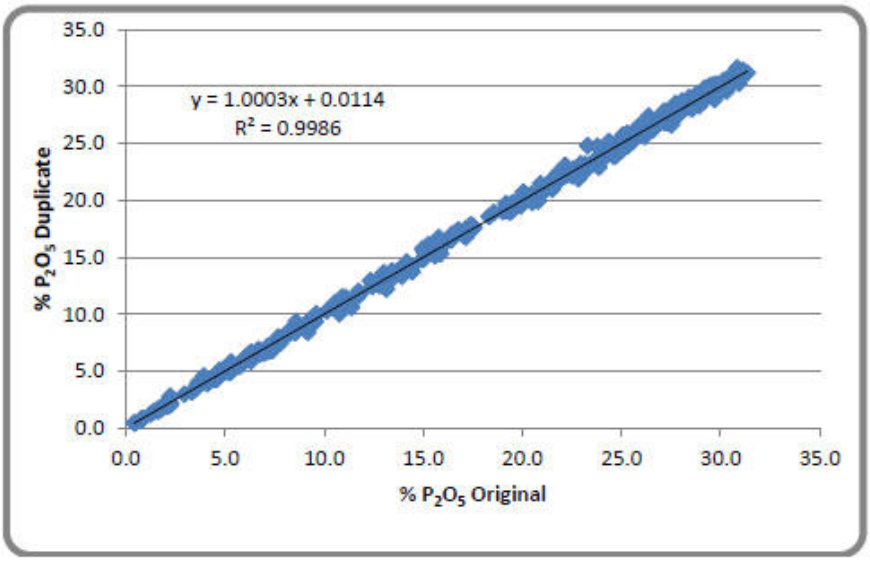

Figure 14-3 Comparison of Original and Duplicate Ore Head P_2O_5 Assays

During laboratory Phases 3, 4, 5, 6 and 7, the FIPR used Check 22, a standard sample provided by the Association of Fertilizer and Phosphate Chemists (AFPC), for a phosphate rock assay control (P_2O_5, Insol, Fe_2O_3, Al_2O_3, MgO and CaO). One hundred and fifty (150) check assays were performed on Check 22 samples dispersed throughout the size distribution assays. The results indicate that the P_2O_5 assay may be overstated slightly by up to 0.25% P_2O_5 and that the CaO assay may be understated by up to 2.0% CaO. The other compounds control (Insol, Fe_2O_3, Al_2O_3 and MgO) are in close agreement. The P_2O_5 differential is acceptable and the CaO assays may be influenced by the presence of mollusk shells. Adjusting the CaO would cause a change in the CaO/P_2O_5 ratio, which is currently calculated and reported as being lower than normal. The data and statistical comparison of the Check 22 samples is included in Appendix G.

Blanks were analyzed throughout the chemical analyses with the data from laboratory Phases 3, 4, 5 and 6 are reported in Appendix G. In all cases the Blank sample analyses indicated the absence of P_2O_5, Fe_2O_3, Al_2O_3, MgO and CaO and a high content of Acid Insolubles (Insol).

14.3 VERIFICATION PROCEDURES AND LIMITATIONS

FIPR and the QP have taken reasonable precautions to verify the analytical data and the data transfer to the resource calculation system. The procedures used data range tests, cross-checks using assay ratios and audits of the laboratory data sheets, drill logs and the resource calculation database. During the routine verification, the QP reported any discrepancies to FIPR and requested a check of the data entry and in some cases an analytical recheck.

The QP is not aware of any limitations regarding the extent of the data verification. Adjusting the CaO will not have a material impact on the phosphorite ore resources.

14.4 FAILURE TO VERIFY

The laboratory data was verified. This section does not apply.

15.0 ITEM 17: ADJACENT PROPERTIES

The QP has not independently verified the data contained in Section 15.0. The information contained in this section has not been used to describe the DD West Phosphorite Deposit and its resource estimate.

15.1 SANTO DOMINGO PHOSPHORITE DEPOSIT AND MINE

Christie (1981) described the Santo Domingo Phosphorite Deposit as being located 220 kilometers from La Paz. The deposit has been drilled on a 500-m grid and occupies about 70 by 20 kilometers. The proposed mining area occupied about 6,000 hectares; 4% of the total deposit. The Santo Domingo Mine was developed by ROFMEX, began operation in 1982 and was closed in 1985 due to an economic downturn in the phosphate fertilizer industry.

The phosphorite ore is an on-shore beach sand deposit. Hydraulic cutter suction dredges mine the phosphorite to a depth of about fifteen meters with an above sea level face of six meters. The phosphorite ore was fed to a flotation primary beneficiation plant, partly processed and pumped to a lane-based flotation plant to produce a 32% P_2O_5 phosphate rock concentrate and a tailings stockpile of heavy minerals for future processing. The mine plan was based on a 3% P_2O_5 cutoff grade resulting in a 4.3% to 4.6% P_2O_5 ore grade. At a proposed mining rate of 50,000 ore tonnes per day the deposit was reported to be sufficient to support a 75-year mine life yielding 1.5 million tonnes of phosphate rock concentrates annually.

While the industry downturn is the reported cause of the mine closing, it is understood that there were mineral beneficiation issues for the low-grade phosphorite ore that were of equal or greater importance.

15.2 SANTO DOMINGO EXPLORATION CONCESSIONS

In its 8-K report dated May 4, 2009, Innophos provided the following statement:

> *"As previously disclosed, Innophos has sought out potential new sources of phosphate rock to lessen its dependence on outside suppliers. In the first quarter, Innophos obtained from the Mexican government in a qualified bidding process a 50 year phosphate mineral rights concession located at Santo Domingo, Baja California Sur. This site had previously reached development stage under a government sponsored program conducted in the early 1980's, but the project was suspended in 1985 due to depressed phosphate rock prices. Innophos intends to explore this phosphate deposit and determine if resuming development is economically justified.*
>
> *During the quarter the company also obtained a multi-year exclusive option to explore a privately held concession located in the vicinity of the Santo Domingo deposit. Earlier exploration of this concession indicated the presence of phosphorite mineral bearing similar characteristics to the Santo Domingo deposit which could potentially share common processing facilities with the Santo Domingo site.*
>
> *Innophos currently estimates that full exploration costs to a proven reserves standard for the Santo Domingo deposit could require expenditures of $10-15 million over a three year period. This estimate includes mineral rights payments, taxes, mineral resource measurement, beneficiation process design and completion of feasibility studies. Full expenditures would only occur if interim milestone goals were*

successfully attained. It is estimated that 2009 and 2010 expenditures will be approximately $10 million, with efforts primarily focused on the Santo Domingo deposit. Innophos intends to seek one or more partners for these efforts, but anticipates no difficulties in completing the exploration phase without a partnership."

In its 10-Q report dated May 2, 2012, Innophos provided the following update:

"Innophos currently estimates that full exploration costs to a proven reserves standard for its Baja California mining concessions could require expenditures of $10 to $15 million over a period, currently estimated at three to five years, inclusive of expenditures to date. This estimate includes mineral rights payments, taxes, mineral resource measurement, beneficiation process design and completion of feasibility studies. Full expenditures would only occur if interim milestone goals were successfully attained. Combined 2010 and 2011 expenditures on the exploration of the Baja California Sur concession deposits were approximately $2.4 million, and management currently expects to spend in 2012 to early 2013 an additional $2-3 million above the previous trend rate to accelerate evaluations of its Santo Domingo concession. Innophos intends to seek one or more partners for these efforts, but anticipates no difficulties in completing the exploration phase without a partnership."

15.3 PHOSMEX

In 2007, PhosMex, a California Corporation - now inactive, released the following press statement:

"SANTA BARBARA, CA—(CCNMatthews - January 24, 2007) - PhosMex Corporation today announced that it has received the first coastal mineral mining concession in the Pacific Ocean ever granted by the Mexican Government. This concession, granted for the next fifty years, covers 100 square miles. This new type of mining claim was made possible due to a recent change in the Mexican coastal mining law. The concession contains 250,000,000 tons of phosphate ore (P_2O_5), which in today's market is worth over 12 billion dollars. The phosphate rock deposit occurs over a wide area in waters approximately 120 feet deep in continental shelf coastal zones of the Mexican State of Baja del Sur de California. The phosphate-bearing formations crop out both onshore and offshore on both the east and west coasts and in the interior of the Baja peninsula. For the most part, the onshore average phosphate content is sub-commercial, due to a high degree of contamination. However, the offshore deposits have much more attractive ore accumulations that are of a higher grade than found onshore. Technological improvements during the past 25 years have made deeper offshore exploration and dredging commercially attractive. PhosMex Corporation believes, with current technology and the current price of phosphate, an offshore dredging operation will be very profitable in today's market, particularly given the location of this project and the markets this deposit can serve.

PhosMex is currently working to partner with a mining company that can develop this huge resource."

Author's Comment: Based on 40 years of professional experience in the phosphate rock mining industry, the QP strongly disagrees with the 2007 PhosMex valuation of $12 billion. Except in unusual circumstances where the phosphate rock ore is over 30% P_2O_5 and other chemical components are acceptable, it would be necessary to beneficiate the 250 million ore tonnes from the PhosMex deposit to yield a marketable product. Therefore, the marketable phosphate rock concentrates may be significantly less than 250 million ore tonnes.

16.0 ITEM 18: MINERAL PROCESSING AND METALLURGICAL TESTING

Following the ore characterization studies described in Section 13 of this report, it was apparent that the phosphorite ore would need to be beneficiated to meet the general specifications of phosphate rock concentrates used in the various wet processes for manufacturing phosphoric acid.

16.1 MINERAL BENEFICIATION PROCEDURES

16.1.1 Metallurgical Procedures

The combination of the ore characterization tests and binocular microscope inspection of phosphorite ore by its size distribution strongly suggested that the Don Diego West Phosphorite Ore could be beneficiated by a multistage process involving the following steps:

- Washing and Sizing;
- Scrubbing and Sizing;
- Flotation; and
- Density Separation.

16.1.1.1 Washing and Sizing

In the FIPR minerals laboratory, the washing and sizing was simulated in the following manner. After sample preparation an ore sample was introduced into a steel beaker with equal weights of water and equivalent dry ore and was blended at 200 rpm for two minutes then passed over a 0.853-millimeter (20 mesh) screen. The +0.853 millimeter (+20 mesh) material is a waste product to be discarded due to its low P_2O_5 content and high CaO content directly related to a high concentration of coarse-size mollusk shells and fragments.

16.1.1.2 Scrubbing and Cycloning

The scrubbing and cycloning stage has been simulated at the bench scale by continued rinsing of the - 0.853 millimeter material during the size distribution test. Particles being -0.105 millimeters (-150 mesh) represents the fine waste consisting mainly of quartz, clay minerals and other fine-grained minerals and having a low P_2O_5 content and a high SiO_2 content due to the quartz.

16.1.1.3 Flotation

After washing, screening, scrubbing and cycloning, the remaining material in the -0.853 +0.105 millimeters fraction becomes the flotation feed and is subjected to a multi-stage amine float to remove quartz grains and thereby increase the P_2O_5 content. Ninety (90) flotation tests have been completed successfully on broad geographic and stratigraphic range of samples.

16.1.1.4 Density Separation

Density separation tests consisting of heavy media separation, tabling and spiraling were bench scale tested but did not achieve the anticipated results of lowering the CaO content necessary to increase the phosphate rock concentrate P_2O_5. It is unlikely that density separation will be part of the mineral beneficiation process for the Don Diego West Phosphate Ore. It is more likely that the concentrate will be sold at a lower guarantee for the P_2O_5 content or a second flotation stage will be necessary to remove the remaining shell fragments.

16.1.2 Analytical Procedures - Flotation Tests

All chemical assays were performed by the Florida Industrial and Phosphate Research Institute (FIPR) using the procedures established by the Association of Fertilizer and Phosphate Chemists (AFPC). Specifically the assays included P_2O_5, Insol, Fe_2O_3, Al_2O_3, MgO and CaO, the primary compounds characterizing a phosphate rock product. In addition, FIPR was requested to analyze for TiO2 and Cd. In the case of TiO_2 this is a preliminary indicator for the presence of heavy minerals and where they may concentrate in the flotation process. Cadmium (Cd) is a heavy metal for which some fertilizer manufacturers and countries have standards for acceptance. Table 16-1shows the chemical analyses requested for each flotation sample and its components.

TABLE 16-1 CHEMICAL ANALYSES FOR FLOTATION TEST SAMPLES

Component	P_2O_5	Insol	Fe_2O_3	Al_2O_3	MgO	CaO	TiO_2	Cd
Float Feed	X	X	X	X	X	X	X	X
Concentrate	X	X	X	X	X	X	X	X
Amine Tails 1	X	X	X	X	X	X	X	X
Amine Tails 2	X	X	X	X	X	X	X	X
Amine Tails 3	X	X	X	X	X	X	X	X
Fine Waste	X	X	X	X	X	X	X	X

16.1.3 Results

The results of the initial forty-eight mineral beneficiation tests are indicative that producing a phosphate rock concentrate at 28% to 32% P_2O_5 grade is realistic. Phosphate rock quality is typically evaluated on the content of six major compounds: P_2O_5, Insol, Fe_2O_3, Al_2O_3, MgO and CaO as well as certain ratios that predict the behavior of the phosphate rock in the typical wet processes for producing phosphoric acid.

The Don Diego West Phosphorite Deposit contains three distinct components: phosphate rock in the form of marine phosphorite pellets (P_2O_5); Insol as quartz grains (SiO_2); and, calcite, a source of CaO, as mollusk shell fragments. The other three chemical components (Fe_2O_3, Al_2O_3 and MgO) do not occur as discrete particles and cannot be separated by mechanical mineral beneficiation. The MER (Minor Element Ratio) as calculated by summing the percent Fe_2O_3, Al_2O_3 and MgO and dividing by the percent P_2O_5 is within the acceptable range; however, the MgO content may be the most significant of the three minor compounds. The CaO/P_2O_5 is also acceptable but could be improved for many core intervals by separating the shell fragments thereby increasing the P_2O_5 and lowering the CaO resulting in an even better CaO/P_2O_5 ratio, which is indicative of the sulfuric acid consumption in phosphoric acid manufacturing using the wet process methods.

The following triangular charts appropriately summarize each stage of the proposed beneficiation process and suggest the need for modifications or additional stages. In preparing the triangular phase diagrams, the P_2O_5, Insol and CaO assays for each grouping have been normalized to sum to 100% prior to plotting.

Figure 16-1 illustrates the relationship between the three major assays for the 48 core sample intervals used in the flotation tests and shows the dominance of quartz (Insol) in the ore and a transition to ore containing increasing amounts of phosphate pellets (P_2O_5) and shell fragments (CaO). Note the wide but linear trend in the data. The purpose of the beneficiation process is to convert the wide range of ore chemistry into a more uniform product chemistry suitable for the manufacturing of wet process phosphoric acid.

Figure 16-2 shows the strong content of shell fragments (CaO) in the +20 mesh Oversize Waste with lesser amount of quartz grains and phosphate pellets and Figure 16-3 indicates that fine-sized quartz silt is the major component in the -150 mesh fine waste. By screening to separate the coarse waste and cycloning to separate the fine waste, the remaining -20 +150 mesh flotation feed becomes more uniform with the remaining components being phosphate pellets and quartz sand with lesser amounts of shell fragments as illustrated by the narrow linear plot shown in Figure 16-4.

The transition from Figure 16-4 to Figure 16-5 demonstrates the impact of a simple amine flotation stage to remove the excess quartz grains and concentrate the phosphate pellets. Several of the outliers in the plot are due to insufficient reagent application related to early learning curve tests which can be repeated and improved. Some of the remaining scatter is associated with those samples that retained a significant content of shell fragments and suggested that a final beneficiation stage of shell removal will yield a higher grade (P_2O_5) phosphate rock concentrate thereby increasing the market potential and value. Early stage tests for shell removal by mechanical processes have been performed with varying results. ArrMaz, a reagent supplier, is testing a modified reagent application process that has the potential to remove the quartz and shell fragments in a single flotation stage.

The flotation test results that the ore and flotation feed percent P_2O_5 does not have a technical impact on the ability to separate the quartz grains from the phosphate pellets. Given sufficient amine reagents and the absence of shell fragments, any content (3% to 25% P_2O_5) of phosphate pellets can produce a marketable phosphate rock concentrate. The cutoff point will be determined by the cost of reagents and material handling as opposed to the traditional economic model of ore grade itself.

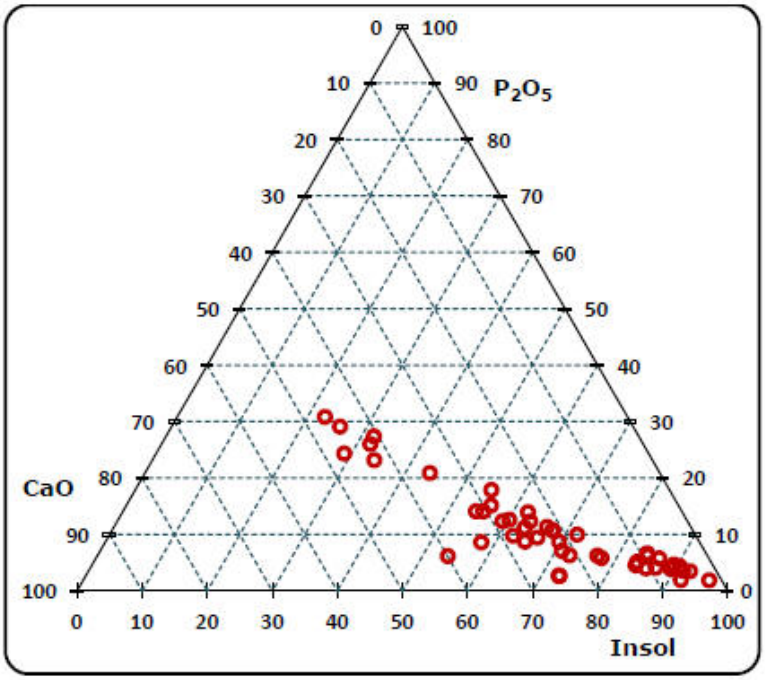

Figure 16-1 Normalized Phase Diagram for the Ore Assays from 48 Flotation Tests

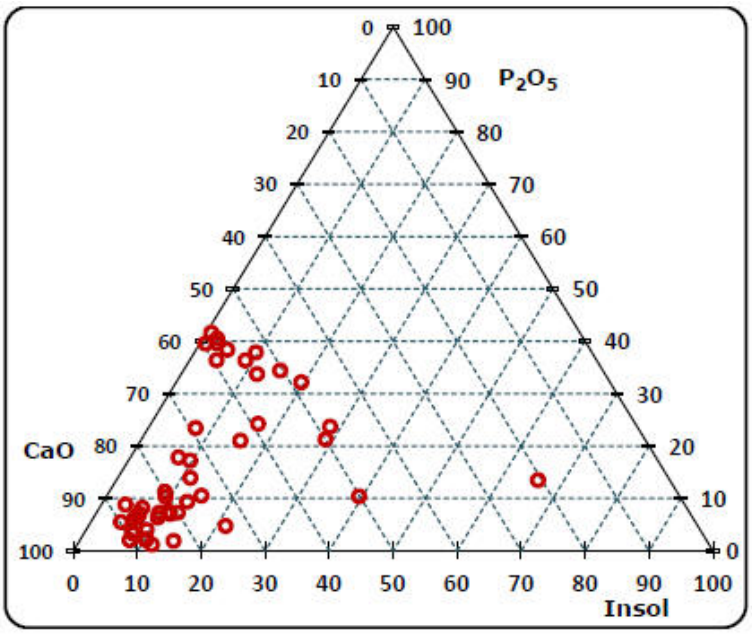

Figure 16-2 Normalized Phase Diagram for the Oversize Waste Assays from 48 Flotation Tests

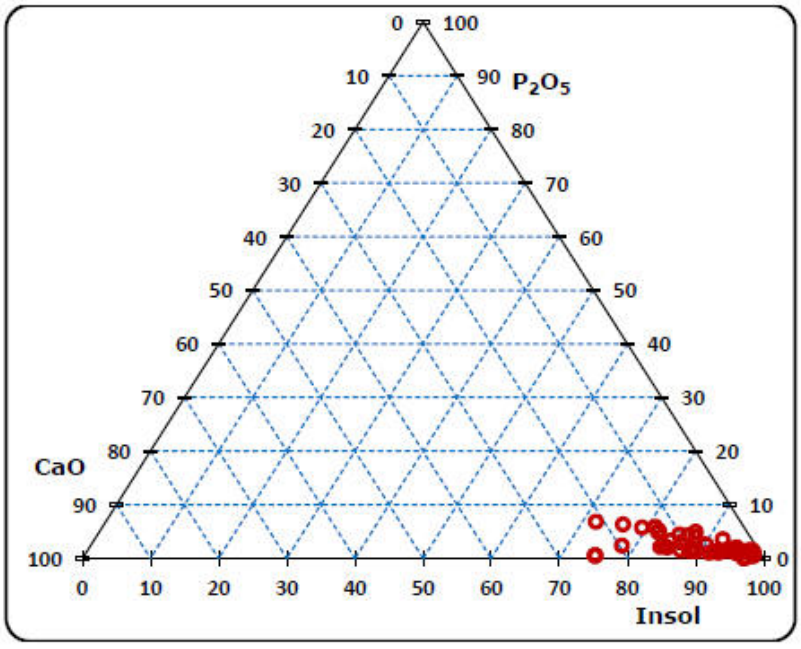

Figure 16-3 Normalized Phase Diagram for the Fine Waste Assays from 48 Flotation Tests

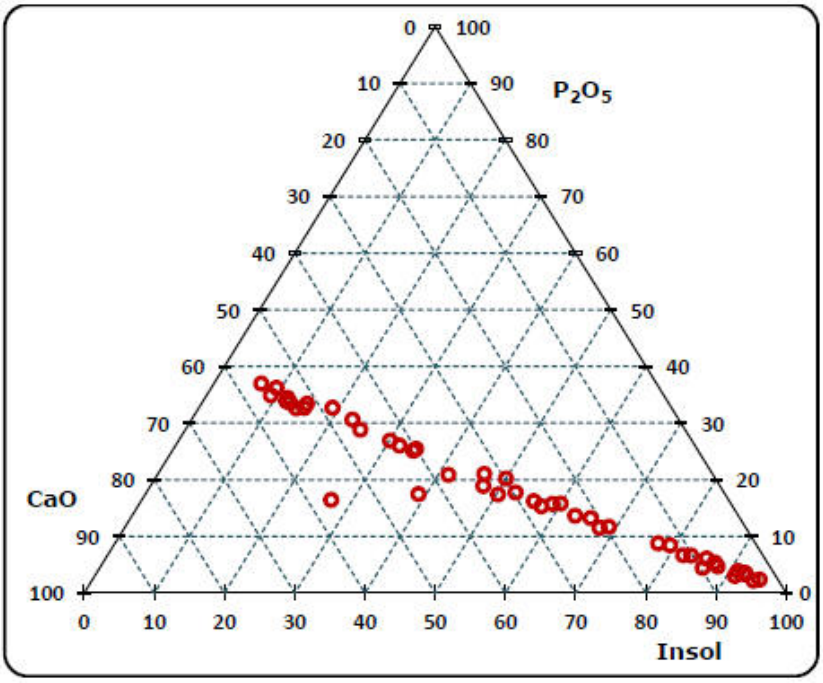

Figure 16-4 Normalized Phase Diagram for the Float Feed Assays from 48 Flotation Tests

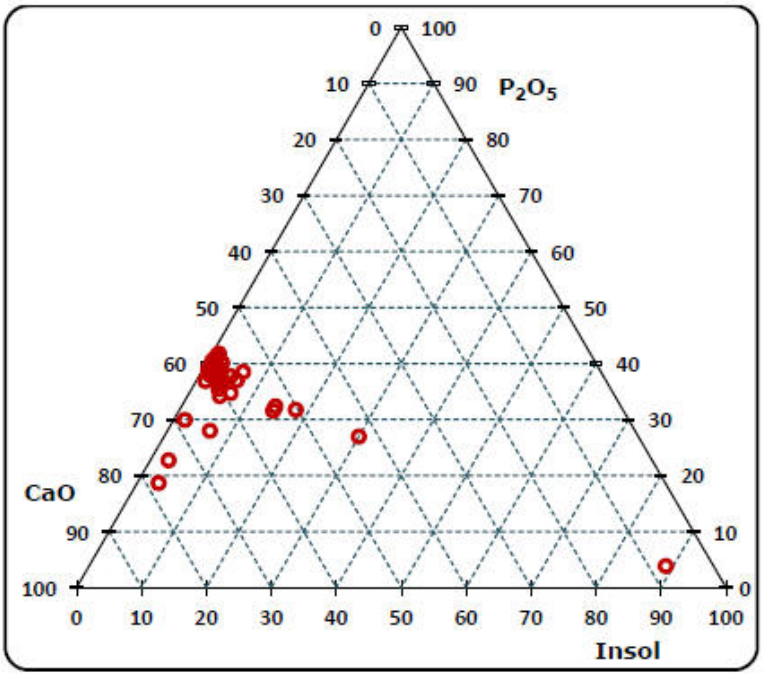

Figure 16-5 Normalized Phase Diagram for Concentrate Assays from 48 Flotation Tests

16.2 REPRESENTATIVE SAMPLES

16.2.1 Ore Characterization

As of June 30, 2014, 199 drill holes have provided 761 sample intervals for bench scale testing to define the ore characteristics. These drill holes and sample intervals cover the geographic range of the DD West Phosphorite Deposit along the NW-SE trend as well as transverse to the trend.

It is the professional opinion of the QP, that the samples tested for ore characterization are representative of the deposit and provide the full range of typical deposit characteristics with variations in density, moisture, particle size distribution, mineralogy, clay content and chemical composition.

16.2.2 Mineral Beneficiation

The same samples that have been tested during for the ore characterization study will undergo laboratory bench scale mineral beneficiation tests including washing, sizing, flotation to remove quartz grains, and a process to be defined to remove sea shell fragments. Preliminary flotation tests have been performed on a variety of samples from across the DD West Phosphorite Deposit.

17.0 ITEM 19: MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

17.1 CONDITIONS FOR REPORTING MINERAL RESOURCE ESTIMATES

In preparation of the mineral resource estimate, the categories have been applied in accordance with the specifications set forth in Section 1.2 of National Instrument 43-101.

The mineral resources for the DD West Phosphorite Deposit are reported as measured, indicated, measured plus indicated, and inferred. Reserves have not been estimated pending the confirmation of a mineral beneficiation flow sheet, development of a mine plan, completion of basic engineering, preparation of an economic/financial analysis and evaluation of the market potential.

In no case have the inferred phosphorite resources been included within any other mineral resource categories.

The mineral resource estimate for the DD West Phosphorite Deposit as summarized and reported in the following subsections was prepared by Mineral Resource Associates (MRA) and its qualified person Mr. Henry J. Lamb. MRA is an independently owned and operated geologic consulting firm and through a Consulting Agreement is providing professional services to the Project. Mr. Lamb is a professional geologist with 40 years experience in the exploration, evaluation, development, maintenance and operation of phosphate rock mines and beneficiation plants in multiple countries. Mr. Lamb, through MRA, is providing consulting services and has no financial interest in Oceanica, its subsidiaries, joint ventures or the Don Diego Project and Mining License.

17.2 ESTIMATED MINERAL RESOURCES FOR THE DON DIEGO WEST PHOSPHORITE DEPOSIT

Available data obtained during the Project exploration program for the DD West Phosphorite Deposit consisting of data obtained by multibeam sonar mapping, core drilling, sampling, assaying and physical testing support the presence of substantial phosphorite ore resources. Inclusion of the new testing data increased the phosphorite mineralized area from 110 to 124 km2.

17.2.1 Measured Phosphorite Resources

The measured phosphorite resources for the DD West Phosphorite Deposit are estimated at 106.9 million ore tonnes at 18.4% P_2O_5 contained within an area of 27.83 km^2. The average overburden thickness is 1.0 meters overlying an average of 2.8 meters of phosphorite. The measure tonnage increase of 14.4 million tonnes (15.6%) is principally due to the measured resource area increasing from 23.11 to 27.83 km^2, a 20.4% increase. With the measured resource tonnage increase there was no material impact on the ore chemistry.

17.2.2 Indicated Phosphorite Resources

The indicated phosphorite resources for the DD West Phosphorite Deposit are estimated at 220.3 million ore tonnes at 18.7% P_2O_5 contained within an area of 55.49 km^2. The average overburden thickness is 1.2 meters overlying an average of 2.8 meters of phosphorite. The indicated tonnage increase of 39.2 million tonnes (21.7%) is principally due to the measured resource area increasing from 42.88 to 55.49 km^2, a 29.4% increase. The increase in indicated resource tonnage did not materially impact the ore chemistry.

17.2.3 Inferred Phosphorite Resources

The inferred phosphorite resources for the DD West Phosphorite Deposit are estimated at 166.4 million ore tonnes at 18.9% P_2O_5 contained within an area of 40.74 km^2. The average overburden thickness is 1.2 meters overlying an average of 2.8 meters of phosphorite.

TABLE 17-1 MEASURED RESOURCES FOR THE DON DIEGO WEST PHOSPHORITE DEPOSIT

	Tonnes (millions)	P_2O_5	Insol	Fe_2O_3	Al_2O_3	MgO	CaO
Ore	106.9	18.4	28.3	0.87	0.88	1.14	30.7
Coarse Waste	4.2	7.9	6.0	0.51	0.28	0.81	47.7
Flotation Feed	75.4	24.6	17.3	0.44	0.54	0.73	38.2
Fine Waste	27.2	3.0	62.4	2.10	1.90	2.33	8.7
Calculated Tailings	13.4	4.9					
Calculated Concentrate	62.0	28.9	3.0				

Cautionary note to US investors: The United States Securities and Exchange Commission (the "SEC") limits disclosure for reporting purposes to mineral deposits that a company can economically and legally extract or produce. Certain terms are used in this report, such as "reserves," "resources," "geologic resources," "proven," "probable," "measured," "indicated," or "inferred," which may not be consistent with the reserve definitions established by the SEC.

TABLE 17-2 INDICATED RESOURCES FOR THE DON DIEGO WEST PHOSPHORITE DEPOSIT

	Tonnes (millions)	P_2O_5	Insol	Fe_2O_3	Al_2O_3	MgO	CaO
Ore	220.3	18.7	27.2	0.87	0.87	1.15	31.2
Coarse Waste	8.9	8.	6.3	0.55	0.30	0.80	47.6
Flotation Feed	155.9	24.9	16.1	0.44	0.53	0.73	38.2
Fine Waste	55.6	3.0	61.4	2.13	1.92	2.36	8.9
Calculated Tailings	25.4	4.9					
Calculated Concentrate	130.5	28.8	3.0				

Cautionary note to US investors: The United States Securities and Exchange Commission (the "SEC") limits disclosure for reporting purposes to mineral deposits that a company can economically and legally extract or produce. Certain terms are used in this report, such as "reserves," "resources," "geologic resources," "proven," "probable," "measured," "indicated," or "inferred," which may not be consistent with the reserve definitions established by the SEC.

TABLE 17-3 INFERRED RESOURCES FOR THE DON DIEGO WEST PHOSPHORITE DEPOSIT

	Tonnes (millions)	P_2O_5	Insol	Fe_2O_3	Al_2O_3	MgO	CaO
Ore	166.4	18.9	25.9	0.90	0.88	1.15	32.0
Coarse Waste	7.1	7.1	7.5	0.65	0.34	0.78	46.6
Flotation Feed	117.5	25.4	14.5	0.45	0.52	0.75	39.2
Fine Waste	41.8	2.8	61.1	2.20	2.00	2.40	9.2
Calculated Tailings	16.9	5.0					
Calculated Concentrate	100.6	28.8	3.0				

Cautionary note to US investors: The United States Securities and Exchange Commission (the "SEC") limits disclosure for reporting purposes to mineral deposits that a company can economically and legally extract or produce. Certain terms are used in this report, such as "reserves," "resources," "geologic resources," "proven," "probable," "measured," "indicated," or "inferred," which may not be consistent with the reserve definitions established by the SEC.

Figure 17-1 Outline of the Don Diego West Phosphorite Deposit (white area)

Figure 17-2 Drill Hole Locations (green dots)

17.3 KEY ASSUMPTIONS, PARAMETERS AND METHODS FOR ESTIMATING PHOSPHORITE RESOURCES

This is a late stage phosphorite exploration project involving both wide and close spaced core holes over a large mining license area. The area has been appropriately reduced to approximately 124 km^2 and identified as the DD West Phosphorite Deposit and is subject to change as additional core drilling, sampling and testing is completed. Any change in the area may impact the current resource estimate for the measured, indicated and inferred categories.

17.3.1 Raw Data and Strata Calculation Procedures

The current category estimates are based on 199 drill holes representing 746.6 meters of drilling and 761 sample intervals. Based on laboratory physical and chemical tests results, the raw data was calculated for each sample interval (strata) and the quantity and quality of each component was reported. Detailed size distribution data was summarized into coarse waste (+0.853 millimeters [+20 mesh]), flotation feed (-20+150 mesh) and fine waste (-150 mesh) and the estimated quantity and quality for each was reported.

Flotation tests have established certain parameters (concentrate % P2O5 and insol, tailings % P_2O_5 and insol, and recovery factors) from a broad geographic range of sample locations at various depths and ore grades. These parameters were used to establish formulae for estimating the concentrate tonnes, % P_2O_5 and insol for each strata containing an acceptable ore quantity and quality.

The details of the strata calculation procedures are outlined in Appendix H and a strata report sheet is included. Due the lengthy nature of the data, Appendix H is attached as a separate volume.

17.3.2 Hole Composite Calculation Procedures

Based on critical physical and chemical characteristics that are directly correlated with Capital Investment and Operating Cost, each strata was classified as waste, marginal and mineable. Waste strata having a high Ore to Concentrate tonnage Ratio, a high Flotation Feed to Concentrate tonnage Ratio, or a low Concentrate P_2O_5 content and lying above a marginal or mineable strata is identified as overburden. The overburden could be removed and discarded in a non-mineralized (sterile) area prior to mining and processing the underlying phosphorite strata. The marginal strata will have a lower economic value but when blended with the mineable strata in a well-defined mine plan could make a positive economic contribution. The mineral strata have favorable physical, chemical and economic characteristics.

Upon development of an economic mining and mineral processing model, each strata will be re-evaluated as to its economic potential and the hole composites are subject to change.

The details of the hole composite calculation procedures are outlined in Appendix I and a hole composite report sheet is included. Due to the lengthy nature of the data, Appendix I is attached as a separate volume.

17.3.3 Resource Calculation Procedures

The resource calculation procedure is based on the geologic data and laboratory testing of the core samples obtained from the drilling program, the reduction of the data into strata calculation reports and compilation of the marginal and mineable strata into mineable hole composites.

Using a conventional polygonal area of influence to weight each mineable hole, the measured, indicated and inferred phosphorite resources were calculated. The chemical characteristics are weight averaged with the tonnes as the weighting factor.

Measured resources are based on the those holes within the transverse cross-sections where the distance between drill holes is approximately 500 meters and the geologic continuity along the primary axis is considered to be 500 meters. Thus, the area of influence is 0.25 km^2.

Indicated resources have an area of influence for each drill hole equal to 1.0 km^2 (500 meters by 2,000 meters). The area of influence for the inferred resources is variable and typically extends midway between transect lines.

The resources have been estimated as if the final product is to be a feedstock for a wet process phosphoric acid plant. The resources are subject to modification based on the requirements of the end user process such as direct application or SSP (single superphosphate).

The details of the resource calculation procedures are outlined in Appendix J and a resource calculation report sheet is included. Due the lengthy nature of the data, Appendix J is attached as a separate volume.

17.4 RELEVANT ENVIRONMENTAL, PERMITTING, LEGAL, TITLE, TAXATION, SOCIO-ECONOMIC, MARKETING AND POLITICAL FACTORS

The extent of the Don Diego West Phosphorite resources may be materially affected by various relative issues including environmental, permitting, legal, title, taxation, socio-economic, marketing and political issues. All of these items are under review by the Project staff including the preparation of an environmental and social impact assessment (ESIA). Presently, there are no known issues that would preclude development.

Legal issues, title and taxation are well defined by the Mining Law of Mexico. Oceanica is evaluating recent changes in the Mining Law.

Socio-economic issues are expected to be minimized by the project location.

Politically, Mexico is recognized as an economy where mining and mineral processing has made a significant historical contribution. Oceanica is closely following political developments in Mexico.

Oceanica has been researching the phosphate rock market and has held discussions with individuals having a specific understanding of that market as well as the market potential for vertically integrated products. A marketing analysis has not been commissioned.

If the project requires financing through the governmental development agencies or commercial lenders, then it is likely that environmental and social impacts will be addressed in an analysis of the World Bank Equator Principles and the International Finance Corporation Performance Standards.

17.5 RELEVANT TECHNICAL FACTORS INFLUENCING THE PHOSPHORITE RESOURCES AND RESERVES

The conceptual, base case development target for the DD West Phosphorite Deposit is an ore body with sufficient mineable reserves to produce 3.5 million tonnes per year of phosphate rock concentrates at 28 to 30% P_2O_5 over a mine life of 20 years. This would support a chemical complex producing approximately 1.0 million tonnes per year of 100% P_2O_5 phosphoric acid for the reasonable life of such a facility. The development target is likely to be modified based on phosphate rock concentrate quality, market and vertical integration options.

The available data indicates that such a production target is within reach and has the potential for expansion or increasing the overall project life.

17.5.1 Geologic and Geographical Configuration

The geologic and geographic configuration of the DD West Phosphorite Deposit is that of a relatively uniform sedimentary bed trending northwesterly-southeasterly over a known distance of more than 60 km. The bed appears to dip at a low angle to seaward (southwesterly) and has been intersected by transverse drill lines demonstrating a width of up to 4 km. The potential phosphorite area has been outlined as 124 km^2 within the current Mining License. It appears that the eastward geographic boundary is known or can be generally identified by the outcropping "hardbottom" feature. The northern, southern and western deposit limits have not been confirmed by drilling and in many drill holes the extent of the phosphorite mineralization is open at depth. The deposit is subject to local variation in ore tonnes and chemical and physical characteristics.

Exploraciones Oceanicas reported that it is applying for additional mining licenses to the northwest and southeast as well as applying for areas where prior mining licenses appear to be abandoned.

The net material effect is likely to be an increase in the resource estimate.

17.5.2 Mining

The DD West Phosphorite Deposit lends itself to conventional sea floor dredge mining using a trailing suction dredge. This technology is readily available from several ocean dredging companies with international experience. The water depth of 70 to 100 m is well within the dredging equipment capabilities and the dredge volumes are obtainable.

The phosphorite bed is exposed on the ocean floor in many areas without any overburden and would allow for immediate mining without the need to move overburden for several years. A detailed mine plan will be required to determine the extent of the non-overburden area. The mining depth in the non-overburden area is expected to vary from one to five meters based on current drilling results and geologic interpretation.

Oceanica is actively discussing with ocean dredging companies the opportunity to provide contract mining services along with a mineral processing option on-board the dredging vessel.

Mine recovery and dilution factors have not been estimated and will impact the mineable reserve estimate; however, any shortfall due to mine recovery could be offset by an increase in the mining and mineral process rate. Therefore, the likely annual impact to the Project is relatively neutral.

17.5.3 Metallurgical Processing

Ore characterization tests and preliminary metallurgical process testing supports a relatively simple mineral beneficiation process to upgrade the phosphorite ore to a marketable product suitable for the manufacturing of phosphoric acid using any of the wet acid processes. The opportunity to use the Improved Hard Process to produce thermal phosphoric acid is being considered and would simplify the mineral beneficiation process. However, the Improved Hard Process remains to be commercialized.

The beneficiation process will begin with phosphorite dredging from the sea floor. The suction and pumping action acting on the ore and sea water slurry is the first stage of washing and should allow for the slurry to be pumped to vibrating screens for removing the +0.853 millimeter (+20 mesh) material and returning the same to the sea floor for disposal. The +0.853 millimeter (+20 mesh) material represents an average of 4% of the ore weight and is composed principally of sea shells and shell fragments with an average content of 47% CaO for this size fraction. This oversize waste product is an all-natural material with the other principal components being quartz and phosphate pellets. The amount of phosphate product lost is estimated at 5% by weight.

The second stage of beneficiation is the continued washing, scrubbing and sizing of the -0.853 millimeter (-20 mesh) phosphorite to separate the fine waste at 150 mesh using hydraulic methods such as cyclones or hydrosizers. Similar to the coarse (+20 mesh) waste, the fine (-150 mesh) waste will be returned directly to the sea floor for disposal. The fine waste represents about 26% of the ore weight with the primary mineral being quartz and having a SiO_2 content averaging greater than 60%. Secondary minerals in the fine waste are sea shells and fragments as well as phosphate pellets.

Oceanica believes that the sizing operations can be performed at sea and on-board the dredging vessel. The resulting material would represent 70% of the ore weight and the average grade would be increased from the ore at 18% P_2O_5 to a material at 24 to 25% P_2O_5 and suitable for additional upgrading by conventional means.

The reject weight percentages will varies from core hole to core hole and at depth within each core hole. Similarly, the P_2O_5 content of the ore size fractions is subject to variation.

The third beneficiation stage is amine flotation to remove excess quartz and bring the final concentrate to 28 to 30% P_2O_5. This may or may not be followed by a gravity separation stage to remove any remaining shell fragments. The ability and environmental sensitivity to perform flotation on-board a vessel or ocean platform is under investigation.

The coarse and fine waste separation has been tested for each core interval. Amine flotation testing has been completed on a variety of core interval samples covering the full geographic range of the deposit, depth and ore grade with the results being positive. The gravity separation stage has been tested with mixed results and the conclusion that, if this processing step is necessary, then additional testing will be required.

Based on the ore characterization and metallurgical tests designed by Mineral Resource Associates and executed by FIPR and Ed Finch & Associates, it is reasonable to conclude that a concentrate grade of 28% to 32% P_2O_5 can be achieved.

The process envisions utilizing known processes and equipment.

17.5.4 Infrastructure

The specialized nature of the DD West Phosphorite Deposit will require special additional consideration of the infrastructure as mining and mineral beneficiation processes are developed.

17.6 ECONOMIC EVALUATION

When conducting any economic analysis only the measured and indicated mineral resources are being considered. Inferred resources will not be used in an economic analysis.

17.7 QUALITY AND QUANTITY OF THE MINERAL RESOURCES

The grade and chemical quality, quantity and category of the mineral resources are reported in Section 17.2.

17.8 POLYMETALLIC MINERAL RESOURCES

The DD West Phosphorite Deposit is not considered to be a polymetallic deposit. The recovery of uranium, heavy minerals or rare earth elements is a chemical plant option and not related to mining and mineral beneficiation.

18.0 ITEM 20: OTHER RELEVANT DATA AND INFORMATION

18.1 MINING LAW AND ROYALTY

In October 2013, the Chamber of Deputies and Senate passed revisions to the Mining Law that imposed a 7.5% tax on mining profits. Oceanica has closely followed this legislation and will incorporate this tax in the Financial/Economic analysis of the Project.

18.2 OTHER ISSUES

There is no additional relevant data and information to be included that would contribute to the understanding and clarification of this report.

19.0 ITEM 21: INTERPRETATION AND CONCLUSIONS

19.1 INTERPRETATION

The geologic and laboratory data has been interpreted in a manner consistent with the procedures applied to marine sedimentary phosphorites.

19.2 CONCLUSIONS

The DD West Phosphorite Deposit has estimated measured resources of phosphorite ore of 106.9 million tonnes at 18.4% P_2O_5, estimated indicated resources 220.3 million tonnes at 18.7% P_2O_5 and estimated inferred resources of 116.4 million tonnes at 18.9% P_2O_5. Additional bench scale testing is underway to improve the mineral beneficiation process and demonstrate the achievement of a higher concentrate grade. Geologic and drilling data strongly suggest that the deposit is open along strike to the north and south, seaward to the west and at depth; therefore, the potential for identifying additional resources is high.

The phosphate rock concentrates appear to be of suitable quality for the production of phosphoric acid using the commercially established wet processes. Particularly favorable product characteristics include a low CaO/P_2O_5 ratio (1.5 to 1.55) and a MER (Minor Element Ratio) of 0.07 to 0.08.

The deposit is a marine sedimentary phosphorite located 20 to 40 kilometers offshore Baja California Sur, Mexico at water depths of 70 to 90 meters. Dredging technology that can be applied to mining this deposit is well established, applied in similar dredging and mining projects and performed by multiple dredging companies on an international scale.

Legal sources indicate that the Don Diego Title of Mineral Concession, Number 240744 as granted by Secretary of the Economy, Coordinacion General de Mineria, Direccion General de Minas is valid as of June 28, 2012, for a period of 50 years.

There is no material advantage to stratigraphic sampling as compared to sampling on 1.0-m intervals. Core samples less than 1.0-m in length do not provide sufficient material for ore characterization and physical testing as well as mineral beneficiation process testing.

20.0 ITEM 22: RECOMMENDATIONS

20.1 EXPLORATION AND SAMPLE ANALYSIS

The prior drilling exploration activities are sufficient to define the phosphate rock resources, establish ore characteristics and define an advanced mineral beneficiation process. Additional core interval analysis using the established procedures at FIPR should be continued for those extensions to the current property boundaries when mining licenses are granted

The estimated cost to complete future samples is broadly estimated at $250,000 but may be reduced significantly by not processing those core intervals with a low ore P_2O_5 content (<4% P_2O_5) and those core intervals evaluated by MRA and recommended for no additional processing. The MRA evaluation is a subjective comparison to adjacent intervals, potential overburden depth and may include intervals with P_2O_5 contents of 8% to 9% P_2O_5.

20.2 MARKET ANALYSIS

Oceanica is advised to commission a market analysis to help provide direction for the business development model including the projected market value. The estimated cost for the market study prepared by a reputable marketing firm is $250,000.

20.3 RESOURCE ESTIMATE UPDATE

Upon the completion ore characterization for the existing core intervals, update the resource estimate. The estimated cost for this activity is $30,000.

20.4 RESERVES AND MINE PLANNING

Following the inclusion of all resource data and development of a project business model and coupled with a viable economic model develop a phosphate rock reserve estimate supported by a production mine plan. The mine plan should be annualized for 20 years with the first 2 years reported on monthly intervals.

The cost of the reserve estimate and mine plan is estimated at $350,000.

20.5 PHOSPHORIC ACID TESTING

The vast majority of phosphate rock products are used in the manufacturing of phosphoric acid using one of several wet process phosphoric acid methods. Oceanica is advised to commission a wet process phosphoric acid pilot plant test using a representative bulk sample.

The estimated cost of this test is $160,000.

Oceanica commissioned a simplified bench scale phosphoric acid test, performed by K-Technologies located in Lakeland, Florida. The results indicate that sized concentrate (non-floated) material can be used to produce phosphoric acid. However, the granulation of that acid may be impacted by a higher than expected Minor Element Ratio. The presence of higher than expected levels of Cd and Cr may impact the phosphoric acid quality and downstream uses. The bench scale test is a useful indicator for designing future full scale acidulation tests.

20.6 BUSINESS DEVELOPMENT MODEL

Continue with the application for additional mining licenses to the northwest and southeast as well as any abandoned areas previously held by other parties. The estimated cost for this activity is relatively low and is anticipated to be less than $150,000 including the application, surveying and initial land payment.

Develop a Financial/Economic model including capital and operating cost estimates based on current project engineering levels. This activity can be conducted in-house at relatively low cost including a facilitated discussion over a one to two day period.

20.7 FEASIBILITY STUDY

Commission a basic engineering assessment (FEL 3) of the project using a third-party engineering company experienced in marine mining and phosphorite mineral processing. The estimated cost for this study is estimated at $6 to $8 million. A lower cost option is to commission a two-stage program for a Pre-Feasibility Study and depending upon the results then move to a FEL 3 assessment.

21.0 ITEM 23: REFERENCES

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22.0 ITEM 24: DATE AND SIGNATURE PAGE

22.1 STATEMENT OF CERTIFICATION BY THE PRINCIPAL AUTHOR AND EDITOR

I, Mr. Henry J. Lamb, P.G., do hereby certify that:

1. I am the President of Mineral Resource Associates, 501 North Church Avenue, Mulberry, Florida 33860, United States, and principal author and editor of the report "Technical Report: Preliminary Assessment of the DD West Phosphorite Deposit, Mexico." I am responsible for all sections and I have reviewed and edited all sections of this Technical Report.
2. I graduated with a Bachelors of Science degree in Geology from North Carolina State University, Raleigh, North Carolina, in 1971 and a Master's of Science degree in Geology from Michigan Technological University, Houghton, Michigan, in 1974.
3. I am a Licensed Professional Geologist in the State of Florida (Number 70). I am a Licensed Professional Geologist in the State of North Carolina (Number 211).
4. I am a Certified Professional Geologist of the American Institute of Professional Geologists (Number 4430).
5. I have practiced my profession since 1973.
6. I am a Geological Consultant with extensive experience in the international phosphate rock and fertilizer industry and have been practicing in this capacity since September 1977.
7. As a consulting geologist, I have provided services over the past 36 years to phosphorite and phosphate rock projects in varying aspects of exploration, resource and reserves evaluation, development, operations, maintenance and marketing.
8. These services have ranged from scoping to feasibility studies, geologic exploration, resource and reserve estimation, mine planning, permitting, ore characterization, laboratory and pilot plant test design, due diligence investigations, economic and financial analysis, rehabilitation of existing facilities, verification of development and construction activities, and interpretation of geologic factors as they impact mine and beneficiation plant design.
9. As a result of my experience and qualifications, I am a *Qualified Person* as defined in National Instrument 43-101.
10. I have no involvement with or investment in Oceanica Resources, S. de R.L., its subsidiaries, its parent, or principals.
11. I am independent of the issuer according to application of the tests presented in Section 1.4 of National Instrument 43-101.
12. I have not visited the site. I have inspected the drill core held by Florida Industrial and Phosphate Research Institute (FIPR) prior to and during its ore characterization and bench scale testing.
13. Opinions and geological interpretations expressed herein are based on the information provided and the general experience and expertise possessed by the Qualified Person. These opinions are offered for the further information and consideration of Oceanica Resources, S. de R.L and are subject to change as new data is acquired and digested.

14. I am not aware of any material fact or material change with respect to the subject matter of this Technical Report that is not reflected in this report, the omission to disclose which would make this report misleading in any way.

15. I have read National Instrument 43-101 and Form 43-101 F1. This report has been prepared in compliance with these documents to the best of my understanding; with the exception of the capital and operating cost estimates and the economic analysis that are relying on assumptions and general (non-specific deposit) estimates often applied in the phosphate industry for early stage projects. In additional activities are on-going with respect to mineral beneficiation options, no basic engineering has been performed, a feasibility study has not been prepared and the market potential has not been evaluated.

16. I consent to the filing of this Technical Report with appropriate stock exchanges and other regulatory authorities and any publication by them for regulatory purposes, including electronic publication in the public company files on their web sites accessible by the public, of the Technical Report.

Dated the 30th day of June 2014.

/s/ Henry J. Lamb
Henry J. Lamb, P.G. (Florida, North Carolina), C.P.G.

23.0 ITEM 25: ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORTS ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES

23.1 MINING OPERATIONS

23.1.1 Mining

Oceanica envisions that application of a trailing suction dredge to mine the outcropping phosphorite ore for the initial production years and then move to those areas where it is necessary to remove a thin layer (1.0 to 2.0 meters) of low-grade phosphatic sands and shell to expose the underlying phosphorite. This technology is readily available at the required water depths and is commonly employed for ocean dredging projects.

The anticipated work schedule is 315 days per year with suitable downtime for annual ship maintenance and avoidance of any severe weather conditions.

Any one of several ocean dredging contractors can provide the necessary mining services on a contract basis.

23.1.2 Metallurgical Processes

The mineral beneficiation process will focus on producing a 30% P_2O_5 phosphate rock concentrate with other physical and chemical specifications suitable for the production of wet process phosphoric acid.

The beneficiation process is under investigation and is likely to include washing, screening, scrubbing, desliming by cycloning, flotation and gravity separation by cycloning or hydrosizing, filtration and drying.

Other metallurgical options are available with those processing options and product specifications being dependent upon the intended phosphate-based fertilizer to be manufactured.

23.1.3 Production Forecast

The nominal production forecast is 3.5 million tonnes per year of phosphate rock concentrates containing 30% P_2O_5 and meeting secondary chemical specifications for the production of wet process phosphoric acid, an intermediate product to manufacturing granular, phosphate-based fertilizers. Other production options may be considered that would lower the tonnage and chemical specifications in exchange for producing a non-DAP phosphate fertilizers.

23.2 RECOVERABILITY

Recovery and dilution factors for the mine have not been estimated. Beneficiation plant recovery is based on laboratory testing for the physical sizing of coarse and fine waste followed by the general metallurgical formula for a two-product flotation process. Plant recoveries have been applied in the phosphate rock concentrate calculations.

23.3 MARKETS

The phosphate rock concentrate produced from the DD West Phosphorite Deposit will most likely be sold to an independent third party or parties engaged in the manufacturing of phosphoric acid using a wet phosphoric acid process. There are multiple potential end-users in the United States, Canada, Mexico, Philippines, Brazil, Korea and India.

Oceanica has not commissioned an independent third party analysis of the phosphate rock market and its specific opportunities.

23.4 CONTRACTS

Relying upon information provided by Oceanica, the DD West Phosphorite Deposit is not subject to the terms of and agreements related to mining, concentrating, smelting, refining, transportation, handling, sales and hedging and forward sales contracts or arrangements, rates or charges.

23.5 ENVIRONMENTAL CONSIDERATIONS

Oceanic is proceeding with the preparation and filing of the appropriate documents to obtain environmental permits for mining the DD West Phosphorite Deposit.

23.6 TAXES, ROYALTIES AND OTHER GOVERNMENTU LEVIES

Prior to production, the Don Diego Phosphorite Project is subject to an annual rental fee based on the number of hectares within the Don Diego Mineral Concession. In 2012 and 2013, the annual rental fee is $0.8493 per hectare for 268,238 hectares equal to $227,814. This rental fee increased to $1.2695 per hectare in 2014. Table 4-4 summarizes the anticipated annual rental fee for the initial four years.

In October 2013, the Mexican Government passed legislation that will provide for a mineral production tax of 7.5% of the product value.

23.7 CAPITAL AND OPERATING COST ESTIMATES

Oceanica has not completed the basic engineering necessary for the reliable estimating of capital and operating cost estimates.

23.8 ECONOMIC ANALYSIS

Oceanica has not prepared an economic analysis of the Project that meets the standards for a NI 43-101 report.

23.9 PAYBACK

Oceanica has not prepared an economic analysis of the Project that estimates the payback period.

23.10 MINE LIFE

The target for the Don Diego Phosphate Project is to identify a measured and indicated phosphate rock resource applicable for the production of 100 million tonnes of phosphate rock concentrates with a suitable chemistry for the production of wet process phosphoric acid. The conceptual mine plan envisions annual production of 3.5 million tonnes of phosphate rock concentrates for 20 years.

24.0 ITEM 26: ILLUSTRATIONS

Illustrations are appropriately located throughout this document and conform to the requirements for a NI 43-101 Technical Report.

25.0 APPENDIX A: HAYS SHIPS LOCATION LETTER

HAYS SHIPS

HAYS SHIPS LTD
Kilda House, Bruntland Road, Portlethen,
Aberdeen AB12 4QL Scotland
Tel: 01224 781 434 Fax: 01224 783 407
e-mail: hays@haysships.com

To whom it may concern,

The Hays Ships Ltd. is the owner and operator of the Research Vessel Dorado Discovery, which has been engaged under a long-term charter agreement, dated March 1, 2012 with Odyssey Marine Exploration, Inc. We hereby confirm that from October 11, 2012 through March 1, 2013, the Dorado Discovery, under captain and crew contracted by Hays Ships Ltd, spent this time period either in transit or working in the Pacific Ocean, Mexican Exclusive Economic Zone waters, near the coast of Baja California Sur, conducting multi-beam sonar and/or seabed coring of the site known as the Don Diego Mineral Concession. The technical staff conducting said operations were operating under the direct control of Odyssey Marine Exploration as contractor for Exploraciones Oceanicas, S. de R.L. de C.V. Documentation of these activities is contained in the Ship's Log Book, as prepared by the various captains of the Dorado Discovery, and held aboard the ship's bridge.

The aforesaid is, to the best of our knowledge, true and correct in all material ways, and is further substantiated as documented in the Ship's Log book, held on board in the Bridge of the Dorado Discovery.

Sincerely,

Name and title: Torquil MacGregor Operations Manager

Date: 24th May 2013

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hays@haysships.com

REG NO: 3840801
VAT NO: 743 2025 66

26.0 APPENDIX B: DON DIEGO MINERAL LICENSE

EXP. NUM. 100/00594

ORIGINAL

ESTADOS UNIDOS MEXICANOS

SECRETARIA DE ECONOMIA
COORDINACION GENERAL DE MINERIA
DIRECCION GENERAL DE MINAS

12671

TITULO
DE
CONCESION MINERA
NUMERO 240744

NOMBRE DEL LOTE

DON DIEGO

AGENCIA

LA PAZ, BAJA CALIFORNIA SUR

VIGENCIA DEL TITULO

DEL 28 DE JUNIO DEL 2012 AL 27 DE JUNIO DEL 2062

LOCALIZACION DEL LOTE MINERO

PUNTO DE PARTIDA

La mojonera o señal reglamentaria se localiza en :

TERRENOS DEL MUNICIPIO DE COMONDU, EN LAS INMEDIACIONES DEL CAMPO PESQUERO SAN ANDRESITO, COMO A 70 MTS. AL NORESTE DEL FARO BOCA DE PABELLON AMARILLO.

Distancia			Rumbo	Nombre o poblados o accidentes topográficos
A	9000	Mts. Al	NW	DEL POBLADO FRANCISCO VILLA
A	9500	Mts. Al	NW	DEL POBLADO POZA GRANDE

COORDENADAS U.T.M. : 2,854,495.092 mN 387,797.601 mE

	Rbo	Gra	Min	Seg	Mts.
LIGA TOPOGRAFICA DEL PP AL PUNTO DE CONTROL No. 4205 :	NE	13°	13'	7.4"	30,364.382

LIGAS TOPOGRAFICAS A LOTES MINEROS COLINDANTES:

Nombre del Lote o Vértice :	No. de Título/Expediente/Vértice	Rbo	Gra	Min	Seg	Mts.
FOSPAC	T-236987	NW	30°	26'	5.44"	32,845.993

PERIMETRO

Linea Auxiliar :

Rbo	Gra	Min	Seg	Mts.	Rbo	Gra	Min	Seg	Mts.

LADOS, RUMBOS Y DISTANCIAS HORIZONTALES :

LADOS	Rbo	Gra	Min	Seg	Mts.	LADOS	Rbo	Gra	Min	Seg	Mts.	LADOS	Rbo	Gra	Min	Seg	Mts.
PP - 01	W	0°	0'	0"	8,000.000												
01 - 02	N	0°	0'	0"	10,500.000												
02 - 03	W	0°	0'	0"	10,000.000												
03 - 04	N	0°	0'	0"	6,700.000												
04 - 05	W	0°	0'	0"	5,000.000												
05 - 06	N	0°	0'	0"	7,800.000												
06 - 07	E	0°	0'	0"	6,000.000												
07 - 08	N	0°	0'	0"	3,220.000												
08 - 09	W	0°	0'	0"	21,438.410												
09 - 10	S	0°	0'	0"	21,400.000												
10 - 11	W	0°	0'	0"	16,800.000												
11 - 12	N	0°	0'	0"	18,700.000												
12 - 13	E	0°	0'	0"	16,700.000												
13 - 14	N	0°	0'	0"	2,800.000												
14 - 15	E	0°	0'	0"	21,538.410												
15 - 16	N	0°	0'	0"	4,480.000												
16 - 17	W	0°	0'	0"	50,900.000												
17 - 18	S	0°	0'	0"	55,600.000												
18 - 19	E	0°	0'	0"	60,200.000												
19 - 20	N	0°	0'	0"	16,700.000												
20 - 21	E	0°	0'	0"	8,300.000												
21 - 22	N	0°	0'	0"	6,100.000												
22 - PP	W	0°	0'	0"	600.000												

ATENTO A LO DISPUESTO POR EL SEGUNDO PÁRRAFO DEL ARTÍCULO 20 DE LA LEY MINERA, LAS OBRAS Y TRABAJOS DE EXPLORACIÓN Y DE EXPLOTACIÓN QUE SE REALICEN DENTRO DE LA ZONA FEDERAL MARÍTIMO TERRESTE, ÚNICAMENTE PODRÁN REALIZARSE CON AUTORIZACIÓN, PERMISO O CONCESIÓN, SEGÚN EL CASO, DE LA AUTORIDAD QUE TENGA A SU CARGO LA ZONA CITADA, EN LOS TÉRMINOS QUE SEÑALEN LAS DISPOSICIONES APLICABLES. DEL PERIMETRO DESCRITO DEBE EXCLUIRSE LA SUPERFICIE AMPARADA POR EL LOTE MINERO FOSPAC T-236987, POR UN TOTAL DE 13474 HAS., Y LOS QUE RESULTEN CON MEJORES DERECHOS QUE SE UBIQUEN EN EL INTERIOR DE SU PERIMETRO. LOS DATOS DE LAS COLINDANCIAS DEL LOTE QUE AMPARA ESTA CONCESION OBRAN EN EL EXPEDIENTE DEL PRESENTE TITULO.

Dado en la ciudad de México, Distrito Federal, el 27 de junio del 2012, con apego a lo dispuesto por el artículo 33, fracción VI, del Reglamento Interior de la Secretaría de Economía.

El Director General de Minas

Lic. Miguel Ángel Romero González

Inscrito bajo el acta número 324, a fojas 162, del volumen 394 del Libro de CONCESIONES MINERAS del Registro Público de Minería, en la ciudad de México, Distrito Federal, el 28 de junio del 2012.

El Registrador Público de Minería

Lic. Tatiana Sigler Baca

Obligaciones de los Concesionarios:

LAS OBRAS Y TRABAJOS MINEROS QUE AL AMPARO DEL PRESENTE TÍTULO SE DESARROLLEN, ÚNICAMENTE PODRÁN REALIZARSE CON AUTORIZACIÓN, PERMISO, O CONCESIÓN SEGÚN EL CASO, DE LAS AUTORIDADES QUE TENGAN A SU CARGO LOS BIENES QUE RESULTEN AFECTADOS, ATENTO A LAS DISPOSICIONES APLICABLES; ASIMISMO, SUS TITULARES DEBERÁN SUJETARSE A LAS NORMAS OFICIALES RELATIVAS A LA INDUSTRIA MINERO-METALÚRGICA EN MATERIA DE SEGURIDAD, DE EQUILIBRIO ECOLÓGICO Y PROTECCIÓN AL AMBIENTE. ESTE TITULO ÚNICAMENTE OTORGA DERECHOS SOBRE LOS MINERALES, MÁS NO SOBRE EL TERRENO SUPERFICIAL.

LEY MINERA

ARTÍCULO 20. LAS OBRAS Y TRABAJOS DE EXPLORACIÓN Y EXPLOTACIÓN DE CARBÓN EN TODAS SUS VARIEDADES, EN TERRENOS AMPARADOS POR ASIGNACIONES PETROLERAS SÓLO PODRÁN EJECUTARSE CON AUTORIZACIÓN DE LA SECRETARÍA, LA QUE SOLICITARA OPINIÓN A LA SECRETARÍA DE ENERGÍA PARA FIJAR LAS CONDICIONES TÉCNICAS A QUE DEBEN SUJETARSE LOS MISMOS. LAS OBRAS Y TRABAJOS DE EXPLORACIÓN Y DE EXPLOTACIÓN QUE SE REALICEN DENTRO DE POBLACIONES, PRESAS, CANALES, VÍAS GENERALES DE COMUNICACIÓN Y OTRAS OBRAS PÚBLICAS, EN LOS ZÓCALOS SUBMARINOS DE ISLAS, CAYOS Y ARRECIFES, EL LECHO MARINO Y EL SUBSUELO DE LA ZONA ECONÓMICA EXCLUSIVA, EN LAS ÁREAS NATURALES PROTEGIDAS, ASÍ COMO LAS QUE SE EFECTÚEN DENTRO DE LA ZONA FEDERAL MARÍTIMO TERRESTRE, ÚNICAMENTE PODRÁN REALIZARSE CON AUTORIZACIÓN, PERMISO, O CONCESIÓN SEGÚN EL CASO, DE LAS AUTORIDADES QUE TENGAN A SU CARGO LOS REFERIDOS BIENES, ZÓCALOS, LECHO MARINO, SUBSUELO, LAS ÁREAS O LAS ZONAS CITADAS, EN LOS TÉRMINOS QUE SEÑALEN LAS DISPOSICIONES APLICABLES.

ARTÍCULO 27. LOS TITULARES DE CONCESIONES MINERAS, INDEPENDIENTEMENTE DE LA FECHA DE SU OTORGAMIENTO, ESTÁN OBLIGADOS A: I. EJECUTAR Y COMPROBAR LAS OBRAS Y TRABAJOS PREVISTOS POR ESTA LEY EN LOS TÉRMINOS Y CONDICIONES QUE ESTABLEZCAN LA MISMA Y SU REGLAMENTO; II.- PAGAR LOS DERECHOS SOBRE MINERÍA QUE ESTABLECE LA LEY DE LA MATERIA; III. (SE DEROGA) IV. SUJETARSE A LAS DISPOSICIONES GENERALES Y A LAS NORMAS OFICIALES MEXICANAS APLICABLES A LA INDUSTRIA MINERO-METALÚRGICA EN MATERIA DE SEGURIDAD EN LAS MINAS Y DE EQUILIBRIO ECOLÓGICO Y PROTECCIÓN AL AMBIENTE; V.- NO RETIRAR LAS OBRAS PERMANENTES DE FORTIFICACIÓN, LOS ADEMES Y DEMÁS INSTALACIONES NECESARIAS PARA LA ESTABILIDAD Y SEGURIDAD DE LAS MINAS; VI.- CONSERVAR EN EL MISMO LUGAR Y MANTENER EN BUEN ESTADO LA MOJONERA O SEÑAL QUE PRECISE LA UBICACIÓN DEL PUNTO DE PARTIDA; VII.- RENDIR A LA SECRETARÍA LOS INFORMES ESTADÍSTICOS, TÉCNICOS Y CONTABLES EN LOS TÉRMINOS Y CONDICIONES QUE SEÑALE EL REGLAMENTO DE LA PRESENTE LEY; VIII.- PERMITIR AL PERSONAL COMISIONADO POR LA SECRETARÍA LA PRÁCTICA DE VISITAS DE INSPECCIÓN; IX.- RENDIR A LA SECRETARÍA UN INFORME GEOLÓGICO-MINERO CUANDO LA CONCESIÓN MINERA CORRESPONDIENTE SE CANCELE POR TERMINACIÓN DE SU VIGENCIA, DESISTIMIENTO, SUSTITUCIÓN POR REDUCCIÓN, INFRACCIÓN O RESOLUCIÓN JUDICIAL. EL INFORME DESCRIBIRÁ LOS TRABAJOS DE EXPLORACIÓN Y EXPLOTACIÓN REALIZADOS EN EL LOTE MINERO, O EN LA SUPERFICIE QUE SE ABANDONA, DE ACUERDO A LO ESTABLECIDO EN EL REGLAMENTO DE ESTA LEY. LA SECRETARÍA ENTREGARÁ AL SERVICIO GEOLÓGICO MEXICANO DICHO INFORME PARA QUE SEA INCORPORADO EN EL SISTEMA PÚBLICO DE INFORMACIÓN DEL PROPIO SERVICIO; X.- RENDIR AL SERVICIO GEOLÓGICO MEXICANO, EN EL CASO DE CONCESIONES OTORGADAS MEDIANTE CONCURSO, UN INFORME SEMESTRAL EN LOS MESES DE ENERO Y JULIO DE CADA AÑO, DE LOS TRABAJOS REALIZADOS Y DE LA PRODUCCIÓN OBTENIDA EN EL LOTE AMPARADO POR LA CONCESIÓN MINERA, PARA EFECTOS DE CONTROL DEL PAGO DE LA PRIMA POR DESCUBRIMIENTO O CUALQUIER OTRA CONTRAPRESTACIÓN ECONÓMICA CONTEMPLADA A FAVOR DE DICHO ORGANISMO; XI.- DAR AVISO A LA SECRETARÍA DE ENERGÍA SOBRE EL INICIO Y SUSPENSIÓN DE LAS ACTIVIDADES RELACIONADAS CON LA RECUPERACIÓN Y APROVECHAMIENTO DEL GAS ASOCIADO A LOS YACIMIENTOS DE CARBÓN MINERAL, QUE SE REALICE AL AMPARO DE SU CONCESIÓN MINERA; XII. ACUMULAR, REGISTRAR Y PROPORCIONAR PERIÓDICAMENTE INFORMACIÓN GEOLÓGICA A LA SECRETARÍA DE ENERGÍA RELACIONADA CON LA RECUPERACIÓN Y APROVECHAMIENTO DE GAS ASOCIADO A LOS YACIMIENTOS DE CARBÓN MINERAL; XIII.- AVISAR A LA SECRETARÍA DE ENERGÍA SOBRE EL DESCUBRIMIENTO DE GAS NO ASOCIADO A LOS YACIMIENTOS DE CARBÓN MINERAL, COMO PRODUCTO DE LAS CONCESIONES QUE AMPAREN LA EXPLORACIÓN Y EXPLOTACIÓN DE YACIMIENTOS DE CARBÓN MINERAL, Y XIV.- ENTREGAR EL GAS ASOCIADO A LOS YACIMIENTOS DE CARBÓN MINERAL EN EL PUNTO DE CONEXIÓN QUE INDIQUE PETRÓLEOS MEXICANOS. EN CASO DE QUE NO SE DESTINE AL AUTOCONSUMO, LOS TITULARES DE CONCESIONES MINERAS OTORGADAS MEDIANTE CONCURSO O DE AQUELLAS QUE LAS SUSTITUYAN ESTARÁN OBLIGADOS A CUBRIR, ADICIONALMENTE, LA PRIMA POR DESCUBRIMIENTO Y LA CONTRAPRESTACIÓN ECONÓMICA OFRECIDAS. CUANDO SE TRANSMITAN LOS DERECHOS DERIVADOS DE UNA CONCESIÓN, LAS OBLIGACIONES A LAS QUE SE HACE MENCIÓN EN ESTE ARTÍCULO ESTARÁN A CARGO DEL ADQUIRENTE, SIN PERJUICIO DE LO DISPUESTO EN EL PÁRRAFO TERCERO DEL ARTÍCULO 23 DE ESTA LEY.

Sidigem 3.0 **ID. 20120410000594**

27.0 APPENDIX C: REPORT CONTRIBUTORS

The following members of the Project staff and consultants contributed data and written segments to this report.

27.1 DR. BRIAN PARSONS

Brian Parsons, Ph.D., received his doctorate in Oceanography in 1999 and a Bachelor's degree in Geology in 1994 with both degrees awarded by Old Dominion University in Norfolk, Virginia. He is a geological oceanographer with over 20-years experience in planning, supporting and managing academic, government and industry ocean engineering projects in a variety of shallow, deep and ultra-deep environments through the integration of geophysics, cores, CPT, ROV dives and multibeam for exploration to geohazard assessments worldwide. Prior to his employment by the Project in July 2011, Dr. Parsons was employed by General Dynamics, United States Naval Research Laboratory and URS Corporation. He has working in the waters of more than thirty countries, is active in professional societies and has published numerous scientific papers.

Dr. Parsons served as chief scientist on all four legs from October 2012 to March 2013 during geologic investigation of the Don Diego Mineral Concession. He was responsible for assimilating data from a variety of sources (Multibeam, ROV dives, cores) and accordingly revising the geologic operations plan for the next 24 hours. Each operation plan contained the objective, core locations and ROV dive sites, if applicable. Once approved by the Project Manager, the plan was distributed to the various department supervisors (ROV, Survey, Deck Boss, Ships Officers on the Bridge, Geology and Drilling Contractors) and were posted in public spaces on the vessel. Information about the sediment type was provided to the drilling contractors and discussed in order to predict potential recovery or for re-tooling of the coring devices to maximize recovery in sediments that might cause difficulty. An alternate plan was produced so that the team could rapidly respond to any unforeseen complications so that the vessel could work 24 hours a day collecting data that was vital to understanding the region, the bathymetry, and relation of the bathymetry to the deposit.

27.2 MARK MUSSETT

Mark Mussett, B.S. of Marine Science, Geology Concentration, served as a project geologist from initial exploration literature review through the resource assessment. He was responsible for collaborating on the identification of concession area boundaries and initial sample locations; researched the regional and local climatology and oceanographic conditions; and has been involved in researching the regional geology and environmental conditions as they impact the project. He has assessed data and provided cartographic support to the project, as well as interfacing with laboratories, consultants, offshore operators and the shipboard science team.

27.3 JOHN OPPERMANN

John Oppermann received a MBA in Corporate Finance 1992 and BA in Operations Management and Management Information Systems in 1985 from Pace University in New York. He is currently the Director of Archaeology, Research and Conservation for Odyssey Marine Exploration since 2004. He has over 10 years of experience managing and directing historical shipwreck projects including mining projects since Odyssey began its mineral operations.

27.4 DAVID KRONENFELD

David Kronenfeld, an attorney licensed in the states of Florida, Arkansas and Texas, serves as Odyssey's Associate General Counsel. He has previously worked as an investment banker in St. Louis, Missouri where he advised on both buy and sell-side transactions for middle market companies. During law school, David worked as a summer associate in the Shanghai office of a Chinese law firm and for a boutique law firm performing mergers and acquisitions work for private equity funds.

Mr. Kronenfeld has been intimately involved in the legal matters related to the Don Diego Mineral Concession since January 2013.

27.5 MELINDA J. MACCONNEL

Melinda J. MacConnel graduated cum laude from St. Mary's College, Notre Dame, in 1986 with bachelor's degrees in International Government, French and Theology. In 1990, Ms. MacConnel received her J.D. degree from the University of Florida, College of Law. She is a member of the Florida Bar and the Hillsborough County Bar Association, and is admitted to practice before the United States District Court for the Middle District of Florida and the United States Supreme Court.

Ms. MacConnel was appointed as Executive Vice President, General Counsel and Secretary for Odyssey in June 2012 and formerly served as Vice President and General Counsel from 2008 to June 2012. She joined Odyssey in March 2006 as a Legal Consultant and became Odyssey's General Counsel in January 2007. Prior to joining the Odyssey, Ms. MacConnel practiced law as a Litigation Consultant, providing counsel to attorneys in all areas of law. She has also served as a professor of legal research and writing and has worked as a congressional assistant for the United States House of Representatives, in Washington, D.C. Since joining Odyssey, Ms. MacConnel has been successful in negotiating several key agreements and contracts as well as overseeing all admiralty proceedings and managing a team of international legal consultants.

28.0 APPENDIX D: LABORATORY PROCEDURES

Laboratory Procedure
Don Diego Phosphorite Deposit
Oceanica Resources, S. de R.L.

The following procedure was followed for the ore characterization portion of the initial laboratory testing of the cores from the DD West Phosphorite Deposit collected by Oceanica. This initial testing was performed for each sampled interval for the selected drill holes and was intended to provide valuable data defining the ore characterization.

The testing includes measurement of the following ore components:

- Ore Chemistry;
- Ore Moisture;
- Ore Grain Size Distribution and Chemistry; and,
- Ore Bulk Density.

I. Sample Preparation

- Enter the identifiers for the drill hole and core interval into a log book and onto the laboratory data sheet. Assign appropriate laboratory identification numbers for each sub-component.
- Extract the core tube contents for a core interval (one meter, more or less) onto a clean steel plate.
- Using flat faced shovels, thoroughly chop and mix the total sample.
- Select a 1,500 gram sub-sample for ore chemistry, moisture and grain size distribution.

II. Ore Chemistry and Moisture

- From the above 1,500 gram sub-sample, take a 250 gram sample for ore chemistry and moisture determination.
- Place the “250 gram sample” in an aluminum drying pan, obtain and record the wet weight of the sample less any tare weight for the weighing container.
- Dry at approximately 105ºC until the apparent free moisture is evaporated.
- Obtain and record the dry weight of the sample less any tare weight for the weighing container.
- Grind and otherwise prepare the dry sample for chemical analysis, place in a properly labeled envelope for delivery to the analytical laboratory.
- Using methods approved by the Association of Phosphate and Fertilizer Chemists, analyze the 250 gram sample for P_2O_5, SiO_2, Fe_2O_3, Al_2O_3, MgO and CaO.
- All assay sets should routinely include duplicates, blanks and standards in order to insure QA/QC. The laboratory is invited to provide a recommendation to insure that suitable controls are in place to meet the requirements of JORC and NI 43- 101 resources and reserves reporting standards.
- Record the assays on the data sheet.
- Maintain any unused portion of the sample in a properly labeled envelope.

III. Ore Grain Size Distribution and Chemistry

- Using the remaining portion of the 1,500 gram sample (approximately 1,250 grams), obtain and record the weight of the sample.

- Combine equal parts (by weight) of water and sample and allow to soak for 5 minutes. The solid sample should be completely submerged.
- Transfer to a single-bladed vertical conditioner and mix the wetted sample at ~50% solids and 200 rpm for 2 minutes.
- Inspect the solids and if found not to be sufficiently disintegrated then remix and increase the rpms or mixing time accordingly. Note on the laboratory data sheet any changes to the mixing rpms and time.
- Samples that have a higher fines or clay content may require additional water. Any changes in the 1:1 mixing ratio should be noted on the laboratory data sheet.
- Wet screen the thoroughly mixed sample across a series of screens at 20, 28, 35, 48, 65, 100, 150, 200, 270 mesh and pan (-270 mesh).
- Dry each screen fraction is a separate aluminum drying pan at 105ºC until the apparent free moisture is evaporated.
- Note: Due to the potential high volume of water in the -270 mesh fraction and the potential for a slow settling rate, the laboratory may provide a sub-sampling and drying alternative for this fraction.
- Obtain and record the dry weight of the sample less any tare weight for the weighing container.
- Grind and otherwise prepare the dry sample for chemical analysis, place in a properly labeled envelope for delivery to the analytical laboratory.
- Using methods approved by the Association of Phosphate and Fertilizer Chemists, analyze the 250 gram sample for P_2O_5, SiO_2, Fe_2O_3, Al_2O_3, MgO and CaO.
- All assay sets should routinely include duplicates, blanks and standards in order to insure QA/QC. The laboratory is invited to provide a recommendation to insure that suitable controls are in place to meet the requirements of JORC and NI 43- 101 resources and reserves reporting standards.
- Record the assays on the data sheet.
- Maintain any unused portion of the sample in a properly labeled envelope.

IV. Ore Bulk Density

- Determining the bulk density of a sediment is, at best, a difficult procedure. Several methods have been applied in the phosphate industry with the most basic being a “packing” of a known volume container. The laboratory is invited to submit an alternate procedure for determining the bulk density. A submerged procedure may be applicable.
- Obtain the tare weight of a known volume of a thick bottom and wall steel container with a volume of at least 1/4 cubic foot.
- Check the container and remove any carry over from the prior bulk density test.
- In a layered manner fill the container with chopped core from the Sample Preparation process.
- Pack each layer with a blunt-ended press before inputting the next ore layer.
- Once filled trim and excess from the top of the container to insure a flat surface.
- Weigh and record the weight of the filled container.
- Remove the material from the known volume container and recombine with any remaining material from the core chopping and mixing area.
- Place all material in a properly labeled and sealed, thick plastic bag and store for future testing.
- Clean the container and the core chopping area and prepare for the next sample.

Given the ore characterization study, the next stage of mineral process testing will be defined.

A sample laboratory data sheet in an Excel format will be provided by Oceanica and can be modified as necessary by mutual agreement.

29.0 APPENDIX E: LIST OF PHYSICAL CHARACTERISTICS BY SAMPLE INTERVAL

Average	1.88	25.45%	5.32%	64.64%	30.03%	1.409	14.46
Std. Dev.	0.21	6.32%	6.99%	18.64%	17.91%	0.24	7.40
Count	415	415	415	415	415	415	415
Minimum	1.14	14.91%	0.09%	7.97%	0.65%	0.51	0.52
Maximum	2.53	56.91%	41.86%	98.99%	88.70%	2.00	29.65

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-211 (0.00-1.00)	0	1	2.05	20.63%	8.41%	68.41%	23.18%	1.63	9.25
RC-211 (1.00-2.00)	1	2	2.03	20.80%	10.24%	74.61%	15.15%	1.61	21.20
RC-211 (2.00-3.00)	2	3	1.85	32.32%	0.55%	79.93%	19.52%	1.25	23.50
RC-211 (3.00-3.32)	3	3.32	1.86	37.15%	0.76%	71.15%	28.09%	1.17	20.52
RC-214 (0.00-1.00)	0	1	1.88	28.21%	13.54%	40.30%	46.16%	1.35	3.36
RC-214 (1.00-2.05)	1	2.05	1.73	33.44%	10.82%	7.97%	81.22%	1.15	1.43
RC-218 (0.00-1.00)	0	1	1.94	23.94%	10.67%	40.61%	48.72%	1.47	9.96
RC-218 (1.00-2.00)	1	2	2.03	21.23%	3.38%	74.12%	22.49%	1.60	19.63
RC-218 (2.00-3.00)	2	3	2.16	20.01%	0.53%	83.94%	15.53%	1.73	21.99
RC-218 (3.00-4.00)	3	4	2.03	21.48%	0.20%	85.60%	14.20%	1.59	22.65
RC-218 (4.00-5.00)	4	5	2.05	22.95%	0.31%	82.62%	17.06%	1.58	20.88
RC-218 (5.00-5.70)	5	5.7	2.07	19.90%	0.51%	88.30%	11.19%	1.66	5.92
RC-224 (0.00-1.00)	0	1	2.14	20.81%	20.93%	59.48%	19.58%	1.70	16.25
RC-224 (1.00-2.00)	1	2	2.09	20.31%	0.89%	84.78%	14.33%	1.66	20.57
RC-224 (2.00-3.00)	2	3	2.01	22.92%	1.68%	85.39%	12.93%	1.55	15.34
RC-224 (3.00-4.00)	3	4	2.01	20.82%	0.47%	72.62%	26.92%	1.59	3.37
RC-224 (4.00-5.00)	4	5	2.03	20.72%	0.15%	63.45%	36.39%	1.61	2.21
RC-224 (5.00-5.74)	5	5.7	2.01	20.71%	0.15%	71.08%	28.76%	1.59	2.26
RC-240 (2.0-3.0)	2	3	2.03	23.36%	0.32%	82.79%	16.89%	1.56	23.67
RC-240 (1.0-2.0)	1	2	1.96	25.28%	1.87%	78.31%	19.82%	1.46	21.46
RC-240 (2.0-3.0)	2	3	2.03	23.36%	0.32%	82.79%	16.89%	1.56	23.67
RC-240 (3.0-4.0)	3	4	2.05	25.66%	0.30%	80.99%	18.72%	1.52	23.84
RC-240 (4.0-4.6)	4	4.6	1.90	28.46%	0.42%	80.98%	18.60%	1.36	23.21
RC-242 (0.0-1.0)	0	1	1.94	26.29%	14.76%	63.37%	21.87%	1.43	15.99
RC-242 (1.0-2.0)	1	2	1.97	24.90%	0.45%	63.39%	36.16%	1.48	18.21
RC-242 (2.0-2.8)	2	2.8	1.97	24.61%	0.41%	69.24%	30.35%	1.49	19.96
RC-280 (0.0-1.0)	0	1	1.90	20.11%	10.89%	70.47%	18.64%	1.52	10.47
RC-280 (1.00-2.12)	1	2.12	2.12	20.78%	13.55%	67.15%	19.29%	1.68	18.23
RC-281 (0.00-1.00)	0	1	1.96	23.45%	3.24%	50.41%	46.35%	1.50	3.57
RC-281 (1.00-2.00)	1	2	1.83	19.40%	1.90%	61.69%	36.42%	1.47	6.51
RC-281 (2.00-3.00)	2	3	1.86	19.33%	12.94%	43.15%	43.91%	1.50	8.91
RC-281 (3.00-3.80)	3	3.8	1.96	21.73%	0.29%	66.39%	33.32%	1.53	1.80
RC-282 (0.00-1.00)	0	1	1.79	22.63%	2.46%	50.26%	47.27%	1.38	0.81
RC-282 (1.00-2.00)	1	2	1.79	19.36%	2.17%	54.81%	43.01%	1.44	1.81

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-282 (2.00-3.00)	2	3	1.97	18.47%	26.38%	46.51%	27.11%	1.61	7.03
RC-282 (3.00-4.00)	3	4	1.96	20.22%	4.19%	83.31%	12.51%	1.56	3.81
RC-285 (0.00-1.00)	0	1	1.90	25.68%	8.77%	31.59%	59.64%	1.41	4.89
RC-285 (1.00-2.00)	1	2	1.46	33.11%	2.10%	34.28%	63.61%	0.98	9.44
RC-285 (2.00-2.88)	2	2.88	1.49	39.26%	1.42%	28.86%	69.72%	0.91	9.28
RC-294 (0.00-1.00)	0	1	1.62	41.86%	1.08%	10.22%	88.70%	0.94	1.35
RC-294 (1.00-2.00)	1	2	1.92	25.74%	5.53%	32.69%	61.77%	1.43	4.38
RC-294 (2.00-3.00)	2	3	2.14	20.07%	13.34%	66.10%	20.56%	1.71	19.62
RC-294 (3.00-4.00)	3	4	1.86	21.01%	0.54%	85.25%	14.20%	1.47	25.16
RC-294 (4.00-4.80)	4	4.8	2.03	22.60%	0.50%	86.13%	13.37%	1.57	27.13
RC-297 (0.0-1.0)	0	1	2.05	23.07%	14.38%	52.79%	32.83%	1.58	10.08
RC-297 (1.0-1.94)	1	1.94	1.88	24.95%	5.86%	58.27%	35.87%	1.41	16.08
RC-297 (1.94-3.0)	1.94	3	2.01	22.35%	0.50%	78.15%	21.35%	1.56	21.95
RC-297 (3.0-4.0)	3	4	2.05	20.23%	0.76%	83.92%	15.32%	1.63	23.76
RC-297 (4.00-4.88)	4	4.88	1.99	21.65%	1.31%	84.02%	14.67%	1.56	23.00
RC-299 (0.00-1.12)	0	1.12	2.03	22.72%	11.44%	45.45%	43.11%	1.57	8.58
RC-299 (1.12-2.00)	1.12	2	1.97	23.88%	3.01%	76.95%	20.04%	1.50	20.22
RC-299 (2.00-3.00)	2	3	2.09	18.98%	0.54%	87.16%	12.30%	1.69	23.93
RC-299 (3.00-4.13)	3	4.13	1.83	18.94%	0.71%	88.53%	10.76%	1.48	23.00
RC-307 (0.0-1.0)	0	1	2.01	21.84%	24.56%	49.44%	26.00%	1.57	7.13
RC-307 (1.0-2.2)	1	2.2	1.94	25.26%	0.66%	43.53%	55.81%	1.45	11.57
RC-307 (2.2-3.0)	2.2	3	1.68	35.62%	0.27%	54.88%	44.85%	1.08	13.72
RC-307 (3.0-3.81)	3	3.81	1.83	29.23%	0.28%	46.86%	52.86%	1.29	11.74
RC-314 (0.00-1.10)	0	1.1	2.05	22.88%	11.38%	73.78%	14.84%	1.58	19.25
RC-314 (1.10-2.00)	1.1	2	2.09	21.78%	0.36%	82.56%	17.08%	1.63	23.73
RC-314 (2.00-3.00)	2	3	1.97	23.45%	0.49%	84.88%	14.62%	1.51	24.16
RC-314 (3.00-4.00)	3	4	1.99	22.27%	0.80%	84.78%	14.42%	1.55	23.56
RC-314 (4.00-5.20)	4	5.2	1.97	24.20%	0.69%	88.38%	10.93%	1.50	24.24
RC-323 (0.00-1.17)	0	1.17	2.09	23.41%	2.02%	76.47%	21.51%	1.60	21.22
RC-323 (1.17-2.19)	1.17	2.19	2.07	19.86%	0.84%	88.00%	11.16%	1.66	25.62
RC-323 (2.19-2.52)	2.19	2.52	2.03	20.73%	0.34%	88.84%	10.82%	1.61	25.28
RC-329 (0.00-1.00)	0	1	1.92	22.71%	24.38%	45.98%	29.64%	1.48	8.22
RC-329 (1.0-1.65)	1	1.65	1.85	30.53%	4.70%	49.32%	45.97%	1.28	12.65
RC-329 (1.65-2.00)	1.65	2	1.90	21.22%	3.11%	64.11%	32.78%	1.50	17.14
RC-329 (2.00-3.00)	2	3	1.92	23.96%	0.54%	66.16%	33.30%	1.46	19.08
RC-329 (3.0-3.65)	3	3.65	1.99	23.97%	0.27%	76.80%	22.93%	1.52	21.11
RC-329 (3.65-4.00)	3.65	4	2.09	21.34%	2.32%	79.22%	18.46%	1.64	21.69
RC-329 (4.00-5.00)	4	5	1.99	18.65%	0.39%	87.39%	12.22%	1.62	24.52
RC-329 (5.00-6.00)	5	6	2.03	20.93%	0.46%	85.39%	14.15%	1.61	20.81
RC-330 (0.00-1.00)	0	1	2.01	22.82%	18.81%	39.63%	41.56%	1.55	7.73
RC-330 (1.00-2.00)	1	2	1.73	35.64%	2.96%	47.33%	49.71%	1.12	14.60
RC-330 (2.00-3.00)	2	3	1.72	27.11%	0.29%	63.52%	36.19%	1.25	17.07
RC-330 (3.00-4.00)	3	4	1.90	24.01%	0.19%	73.00%	26.81%	1.44	20.14

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P_2O_5
RC-330 (4.00-4.30)	4	4.3	2.09	20.71%	0.18%	83.22%	16.60%	1.65	23.35
RC-331 (0.00-1.00)	0	1	1.96	25.58%	22.15%	41.82%	36.03%	1.46	6.05
RC-331 (1.00-2.00)	1	2	1.75	32.52%	5.25%	33.56%	61.18%	1.18	8.92
RC-331 (2.0-2.41)	2	2.41	1.68	34.17%	0.57%	43.22%	56.21%	1.11	12.37
RC-331 (2.50-3.50)	2.5	3.5	1.75	28.59%	1.04%	59.16%	39.80%	1.25	18.60
RC-331 (3.50-4.59)	3.5	4.59	1.94	26.68%	0.25%	70.98%	28.78%	1.42	19.67
RC-332 (0.00-1.00)	0	1	1.92	25.67%	15.55%	32.99%	51.46%	1.43	4.89
RC-332 (1.00-2.00)	1	2	1.70	35.21%	2.65%	18.14%	79.21%	1.10	5.04
RC-332 (2.00-3.00)	2	3	1.72	34.52%	1.09%	29.91%	69.00%	1.12	8.97
RC-332 (3.00-4.00)	3	4	1.61	34.60%	0.59%	32.46%	66.95%	1.05	11.79
RC-332 (4.00-4.41)	4	4.41	1.75	31.95%	0.61%	53.40%	45.98%	1.19	17.39
RC-333 (0.00-1.00)	0	1	1.88	28.46%	6.81%	25.75%	67.44%	1.35	2.77
RC-333 (1.00-2.00)	1	2	1.64	38.02%	10.41%	27.07%	62.52%	1.02	3.22
RC-333 (2.00-2.65)	2	2.5	1.59	38.28%	1.24%	12.47%	86.28%	0.98	2.15
RC-333 (2.65-3.0)	2.65	3	1.51	41.76%	0.25%	13.44%	86.31%	0.88	2.13
RC-333 (3.00-4.00)	3	4	1.70	35.10%	1.22%	26.72%	72.06%	1.10	8.21
RC-333 (4.00-4.32)	4	4.32	1.61	31.40%	1.31%	36.20%	62.49%	1.10	11.77
RC-334 (0.00-1.00)	0	1	2.09	21.56%	11.41%	59.56%	29.03%	1.64	13.59
RC-334 (1.00-2.00)	1	2	2.14	18.76%	8.54%	78.19%	13.28%	1.74	21.27
RC-334 (2.00-3.00)	2	3	2.10	23.72%	0.80%	86.06%	13.14%	1.60	23.04
RC-334 (3.00-4.00)	3	4	2.03	23.79%	0.84%	86.71%	12.45%	1.55	22.65
RC-334 (4.0-4.7)	4	4.7	1.96	21.61%	1.06%	88.52%	10.41%	1.53	8.75
RC-335 (0.00-1.00)	0	1	2.16	20.54%	17.12%	58.90%	23.98%	1.72	12.77
RC-335 (1.0-2.0)	1	2	2.01	21.73%	1.41%	83.82%	14.78%	1.57	21.84
RC-335 (2.00-3.00)	2	3	2.01	24.28%	0.44%	85.77%	13.79%	1.52	19.26
RC-335 (3.00-4.00)	3	4	1.90	18.46%	1.06%	88.11%	10.83%	1.55	4.82
RC-335 (4.0-5.0)	4	5	1.94	19.71%	0.61%	74.53%	24.86%	1.56	0.52
RC-335 (5.00-5.75)	5	5.75	1.94	22.24%	0.67%	65.45%	33.89%	1.51	0.57
RC-336 (0.00-1.00)	0	1	2.03	25.66%	8.80%	51.17%	40.03%	1.51	11.89
RC-336 (1.00-2.00)	1	2	1.97	18.72%	15.57%	74.68%	9.75%	1.60	7.32
RC-336 (2.00-3.00)	2	3	1.94	21.11%	1.58%	68.44%	29.97%	1.53	1.61
RC-336 (3.00-4.00)	3	4	1.96	22.50%	0.78%	56.65%	42.56%	1.52	0.71
RC-336 (4.00-4.51)	4	4.51	1.90	18.16%	2.90%	78.29%	18.81%	1.56	3.13
RC-337 (0.00-1.00)	0	1	1.86	27.31%	5.64%	43.79%	50.57%	1.35	5.29
RC-337 (1.00-2.00)	1	2	1.99	23.44%	13.47%	48.08%	38.45%	1.53	7.34
RC-337 (2.00-3.20)	2	3.2	1.66	32.92%	1.61%	57.04%	41.35%	1.11	16.18
RC-337 (3.20-4.12)	3.2	4.12	1.81	23.12%	0.96%	73.74%	25.29%	1.39	21.27
RC-338 (0.00-1.00)	0	1	2.01	28.12%	5.54%	43.93%	50.53%	1.45	4.94
RC-338 (1.00-2.00)	1	2	1.70	37.52%	16.20%	38.48%	45.32%	1.06	7.65
RC-338 (2.00-3.00)	2	3	1.33	35.19%	1.55%	32.92%	65.53%	0.86	10.66
RC-338 (3.00-3.95)	3	3.95	1.57	38.94%	1.47%	33.75%	64.78%	0.96	10.90
RC-339 (0.00-1.00)	0	1	1.99	23.65%	15.20%	52.86%	31.94%	1.52	6.51
RC-339 (1.00-2.14)	1	2.14	1.72	34.45%	20.59%	27.51%	51.89%	1.12	4.18

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P_2O_5
RC-340 (0.00-1.00)	0	1	2.12	20.95%	9.75%	68.46%	21.79%	1.68	12.71
RC-340 (1.00-2.00)	1	2	2.07	21.59%	10.94%	76.95%	12.11%	1.62	17.84
RC-340 (2.00-3.00)	2	3	1.96	25.23%	0.84%	89.51%	9.65%	1.46	15.01
RC-340 (3.00-3.68)	3	3.68	1.83	21.28%	0.52%	76.90%	22.58%	1.44	4.38
RC-341 (0.00-0.68)	0	0.68	1.99	24.72%	1.83%	54.71%	43.45%	1.50	9.14
RC-341 (0.68-1.36)	0.68	1.36	1.96	25.53%	2.44%	69.88%	27.68%	1.46	11.77
RC-341 (1.36-2.36)	1.36	2.36	2.09	18.75%	13.32%	61.63%	25.04%	1.69	11.26
RC-341 (2.36-3.36)	2.36	3.36	1.90	21.65%	0.85%	81.25%	17.91%	1.49	5.65
RC-341 (3.36-4.36)	3.36	4.36	1.99	27.36%	0.56%	55.25%	44.19%	1.45	3.23
RC-341 (4.36-4.89)	4.36	4.89	1.81	20.19%	0.56%	78.10%	21.34%	1.44	3.33
RC-342 (0.00-1.00)	0	1	2.10	26.24%	3.49%	34.75%	61.77%	1.55	3.98
RC-342 (1.00-2.00)	1	2	1.83	19.02%	3.35%	81.44%	15.21%	1.48	8.77
RC-342 (2.00-3.00)	2	3	1.79	19.44%	17.74%	65.09%	17.18%	1.44	10.15
RC-342 (3.00-4.00)	3	4	1.97	19.96%	3.83%	82.80%	13.37%	1.58	4.13
RC-342 (4.00-4.55)	4	4.55	1.99	18.83%	7.26%	84.52%	8.23%	1.62	5.43
RC-343 (0.00-1.00)	0	1	1.73	26.78%	4.40%	40.53%	55.08%	1.27	3.74
RC-343 (1.00-2.00)	1	2	1.70	19.58%	2.52%	78.84%	18.64%	1.37	3.61
RC-343 (2.00-3.00)	2	3	1.75	20.92%	21.80%	66.78%	11.42%	1.39	8.04
RC-343 (3.00-3.57)	3	3.57	1.97	15.26%	9.69%	77.25%	13.06%	1.67	6.19
RC-350 (0.00-1.00)	0	1	1.99	25.76%	3.81%	37.88%	58.31%	1.48	4.66
RC-350 (1.00-2.00)	1	2	2.01	23.08%	9.10%	62.20%	28.69%	1.55	16.00
RC-350 (2.00-3.00)	2	3	2.16	20.33%	1.44%	78.90%	19.65%	1.72	23.18
RC-350 (3.00-4.00)	3	4	2.16	20.01%	0.46%	86.25%	13.29%	1.73	25.50
RC-350 (4.00-5.00)	4	5	2.01	21.65%	0.29%	85.07%	14.64%	1.58	25.57
RC-350 (5.00-5.35)	5	5.35	1.99	22.41%	0.18%	86.10%	13.72%	1.55	26.24
RC-351 (0.00-1.00)	0	1	1.79	28.54%	6.66%	30.29%	63.05%	1.28	3.88
RC-351 (1.00-2.00)	1	2	2.10	23.17%	15.43%	41.75%	42.82%	1.62	7.40
RC-351 (2.00-3.00)	2	3	1.79	24.94%	2.36%	61.57%	36.07%	1.34	18.88
RC-351 (3.00-4.00)	3	4	2.03	25.32%	0.60%	77.01%	22.39%	1.52	22.31
RC-351 (4.00-5.00)	4	5	2.05	19.79%	0.46%	82.25%	17.30%	1.64	23.92
RC-351 (5.00-5.55)	5	5.55	2.16	18.70%	0.63%	81.53%	17.84%	1.76	23.03
RC-352 (0.00-1.00)	0	1	1.92	30.96%	8.63%	24.66%	66.71%	1.32	3.29
RC-352 (1.00-2.00)	1	2	1.99	27.08%	22.01%	48.19%	29.80%	1.45	6.76
RC-352 (2.00-3.00)	2	3	1.83	27.88%	2.94%	41.36%	55.71%	1.32	13.13
RC-352 (3.00-4.00)	3	4	1.92	26.10%	1.10%	67.52%	31.38%	1.42	20.84
RC-352 (4.00-5.00)	4	5	1.99	22.00%	0.24%	82.65%	17.11%	1.55	24.58
RC-352 (5.00-5.59)	5	5.59	1.86	20.32%	0.30%	86.04%	13.67%	1.49	25.94
RC-362 (0.00-0.37)	0	0.37	1.68	36.03%	2.25%	27.77%	69.98%	1.07	4.64
RC-362 (0.37-1.00)	0.37	1	1.97	26.53%	9.39%	47.96%	42.65%	1.45	7.77
RC-362 (1.00-1.88)	1	1.88	2.07	18.95%	22.26%	51.09%	26.65%	1.68	11.18
RC-362 (1.88-2.35)	1.88	2.35	2.10	16.84%	6.55%	75.75%	17.70%	1.75	21.83
RC-362 (2.35-3.35)	2.35	3.35	2.07	20.50%	1.21%	85.45%	13.34%	1.64	24.39
RC-362 (3.35-4.27)	3.35	4.27	1.97	23.47%	0.23%	83.71%	16.06%	1.51	25.03

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-362 (4.27-5.16)	4.27	5.16	1.99	25.85%	2.73%	82.50%	14.77%	1.48	26.85
RC-363 (0.00-0.80)	0	0.8	1.85	27.34%	7.97%	33.43%	58.60%	1.34	4.86
RC-363 (0.80-1.54)	0.8	1.54	2.05	21.74%	24.55%	42.37%	33.08%	1.60	6.41
RC-363 (1.54-1.94)	1.54	1.94	1.75	26.86%	14.99%	50.16%	34.85%	1.28	12.56
RC-363 (1.94-2.73)	1.94	2.73	1.92	25.57%	7.81%	58.25%	33.94%	1.43	16.00
RC-363 (2.73-3.28)	2.73	3.28	1.85	25.28%	5.80%	65.29%	28.91%	1.38	19.09
RC-363 (3.28-3.85)	3.28	3.85	1.99	22.89%	0.44%	81.03%	18.53%	1.54	23.62
RC-363 (3.85-4.64)	3.85	4.64	2.09	20.36%	0.32%	82.22%	17.46%	1.66	24.85
RC-363 (4.64-5.56)	4.64	5.56	1.90	19.55%	0.70%	84.13%	15.18%	1.53	24.46
RC-374 (0.00-1.20)	0	1.2	1.92	24.21%	20.22%	51.84%	27.94%	1.45	2.09
RC-374 (1.20-2.40)	1.2	2.4	1.86	27.39%	0.44%	51.45%	48.11%	1.35	4.32
RC-374 (2.40-3.60)	2.4	3.6	1.83	25.11%	0.23%	26.70%	73.07%	1.37	6.32
RC-374 (3.60-4.80)	3.6	4.8	1.96	27.70%	0.58%	40.27%	59.16%	1.41	10.58
RC-374 (4.80-5.37)	4.8	5.37	1.99	25.07%	0.53%	55.26%	44.21%	1.49	14.72
RC-367 (0.00-1.20)	0	1.2	2.14	22.76%	12.17%	75.30%	12.53%	1.65	16.08
RC-367 (1.20-2.40)	1.2	2.4	2.05	24.59%	1.53%	88.00%	10.48%	1.54	22.67
RC-367 (2.40-3.40)	2.4	3.4	1.97	20.08%	4.14%	83.28%	12.58%	1.58	5.04
RC-367 (3.40-4.24)	3.4	4.24	1.96	18.11%	7.09%	76.69%	16.22%	1.60	1.17
RC-370 (0.00-1.20)	0	1.2	2.03	23.39%	1.41%	63.78%	34.81%	1.56	15.91
RC-370 (1.20-2.40)	1.2	2.4	2.07	24.24%	0.30%	69.53%	30.17%	1.57	19.40
RC-370 (2.40-3.60)	2.4	3.6	1.90	26.98%	0.35%	79.31%	20.34%	1.39	21.39
RC-370 (3.60-4.80)	3.6	4.8	1.94	23.03%	0.22%	78.92%	20.86%	1.49	22.67
RC-370 (4.80-5.73)	4.8	5.73	1.88	21.12%	0.37%	83.12%	16.51%	1.48	22.41
RC-372 (0.00-1.00)	0	1	2.10	22.61%	25.62%	54.36%	20.01%	1.63	5.48
RC-372 (1.00-2.00)	1	2	1.75	27.35%	0.68%	50.65%	48.67%	1.27	12.57
RC-372 (2.00-2.82)	2	2.82	1.42	34.55%	0.23%	49.59%	50.18%	0.93	14.10
RC-308 (0.00-1.00)	0	1	2.10	22.90%	16.11%	73.44%	10.44%	1.62	11.16
RC-308 (1.00-1.60)	1	1.6	1.99	16.04%	27.42%	59.97%	12.62%	1.67	8.43
RC-312 (0.00-0.76)	0	0.76	2.10	22.90%	41.86%	49.51%	8.63%	1.62	9.06
RC-312 (0.76-1.00)	0.76	1							
RC-312 (1.00-2.00)	1	2							
RC-312 (2.00-3.15)	2	3.15							
RC-322 (0.00-1.00)	0	1	1.97	21.34%	3.58%	76.94%	19.48%	1.55	7.12
RC-322 (1.00-2.00)	1	2	1.66	32.60%	14.66%	64.36%	20.98%	1.12	14.33
RC-322 (2.00-3.00)	2	3	1.40	50.46%	0.52%	30.87%	68.62%	0.69	10.87
RC-322 (3.0-4.07)	3	4.07	1.57	40.00%	0.24%	74.69%	25.07%	0.94	14.71
RC-364 (0.00-0.78)	0	0.78							
RC-364 (0.78-1.78)	0.78	1.78	2.12	25.21%	15.18%	31.30%	53.52%	1.59	5.27
RC-364 (1.78-2.78)	1.78	2.78	1.75	26.67%	11.35%	84.64%	4.01%	1.29	23.01
RC-364 (2.78-3.78)	2.78	3.78	1.75	24.65%	0.45%	98.90%	0.65%	1.32	29.33
RC-364 (3.78-4.14)	3.78	4.14	2.14	22.88%	0.34%	98.99%	0.66%	1.65	29.65
RC-364 (4.14-4.88)	4.14	4.88	2.16	21.28%	0.47%	83.60%	15.93%	1.70	25.44
RC-364 (4.88-5.86)	4.88	5.86	2.10	19.51%	0.35%	89.04%	10.62%	1.69	26.25

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-208 (0.00-1.00)	0	1	1.97	17.11%	21.10%	63.03%	15.87%	1.64	5.14
RC-208 (1.00-2.00)	1	2							
RC-208 (2.00-3.00)	2	3							
RC-208 (3.00-4.00)	3	4							
RC-208 (4.00-5.00)	4	5							
RC-208 (5.00-5.67)	5	5.67							
RC-209 (0.00-1.00)	0	1	1.88	21.06%	11.52%	79.74%	8.74%	1.49	15.70
RC-209 (1.00-2.00)	1	2	1.66	15.04%	29.91%	61.45%	8.64%	1.41	11.91
RC-209 (2.00-3.00)	2	3							
RC-209 (3.00-4.00)	3	4							
RC-209 (4.00-4.79)	4	4.79							
RC-321 (0.00-1.00)	0	1	1.77	23.35%	12.01%	59.18%	28.81%	1.36	7.16
RC-321 (1.00-2.00)	1	2	1.33	37.80%	1.52%	33.35%	65.13%	0.83	9.05
RC-321 (2.00-3.00)	2	3	1.57	43.33%	0.27%	47.52%	52.22%	0.89	13.17
RC-321 (3.00-4.00)	3	4	1.73	26.42%	0.14%	53.67%	46.19%	1.28	15.82
RC-321 (4.00-4.66)	4	4.66	1.94	20.16%	0.47%	75.23%	24.30%	1.55	21.08
RC-383 (0.00-1.20)	0	1.2	1.85	25.03%	6.07%	52.05%	41.87%	1.38	12.20
RC-383 (1.20-2.40)	1.2	2.4	1.73	26.36%	0.27%	44.62%	55.11%	1.28	11.68
RC-384 (0.00-1.00)	0	1	1.79	16.79%	16.03%	48.41%	35.56%	1.49	6.65
RC-384 (1.00-2.00)	1	2	1.29	47.76%	0.91%	23.37%	75.72%	0.67	6.25
RC-384 (2.00-2.58)	2	2.58	1.53	39.35%	0.57%	39.25%	60.18%	0.93	9.75
RC-379 (0.00-1.20)	0	1.2	2.07	24.21%	7.05%	62.86%	30.08%	1.57	13.94
RC-379 (1.20-2.40)	1.2	2.4	1.99	24.67%	0.43%	74.73%	24.83%	1.50	18.56
RC-379 (2.40-3.60)	2.4	3.6	1.66	27.67%	0.24%	72.92%	26.84%	1.20	20.91
RC-379 (3.60-4.80)	3.6	4.8	1.79	28.71%	0.21%	76.27%	23.52%	1.28	24.41
RC-379 (4.80-6.00)	4.8	6	2.01	21.51%	0.29%	83.77%	15.94%	1.58	24.10
RC-380 (0.00-1.20)	0	1.2	1.90	22.44%	12.38%	71.00%	16.62%	1.47	17.60
RC-380 (1.20-2.40)	1.2	2.4	2.03	27.48%	0.65%	80.57%	18.78%	1.47	22.99
RC-380 (2.40-3.50)	2.4	3.5	2.10	23.20%	0.29%	85.03%	14.68%	1.62	24.27
RC-380 (3.50-4.53)	3.5	4.53	2.03	22.87%	0.60%	78.93%	20.47%	1.57	24.55
RC-381 (0.00-1.20)	0	1.2	2.07	23.35%	12.83%	75.51%	11.66%	1.58	17.53
RC-381 (1.20-2.40)	1.2	2.4	1.81	23.72%	0.99%	86.94%	12.07%	1.38	24.78
RC-381 (2.40-3.60)	2.4	3.6	1.83	24.88%	0.30%	88.43%	11.27%	1.37	26.41
RC-381 (3.60-4.30)	3.6	4.3	1.81	23.26%	1.77%	90.90%	7.33%	1.39	9.52
RC-381 (4.30-4.97)	4.3	4.97							
RC-423 (0.00-1.20)	0	1.2	1.79	22.30%	10.07%	72.95%	16.98%	1.39	8.00
RC-423 (1.20-2.20)	1.2	2.2	1.42	29.68%	13.81%	41.30%	44.90%	1.00	5.48
RC-423 (2.20-2.54)	2.2	2.54							
RC-418 (0.00-1.20)	0	1.2	2.18	22.98%	5.05%	81.42%	13.53%	1.68	11.54
RC-418 (1.20-2.40)	1.2	2.4	1.31	56.91%	2.17%	31.05%	66.78%	0.56	10.53
RC-418 (2.40-3.21)	2.4	3.21	1.38	51.38%	0.17%	41.25%	58.58%	0.67	13.60
RC-419 (0.00-1.10)	0	1.1	2.20	22.80%	4.63%	79.25%	16.12%	1.70	8.20
RC-419 (1.27-2.40)	1.27	2.4	2.05	21.09%	1.76%	87.29%	10.95%	1.62	26.04

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-419 (2.40-3.60)	2.4	3.6	2.05	27.19%	0.28%	86.49%	13.22%	1.49	26.51
RC-419 (3.60-4.57)	3.6	4.57	1.51	45.34%	0.28%	68.76%	30.96%	0.83	21.50
RC-420 (0.00-1.20)	0	1.2	2.10	22.80%	7.61%	70.22%	22.17%	1.62	6.98
RC-420 (1.20-2.40)	1.2	2.4	2.18	21.18%	0.78%	87.16%	12.06%	1.72	23.46
RC-420 (2.40-3.40)	2.4	3.4	2.16	21.13%	0.50%	86.68%	12.82%	1.70	25.46
RC-420 (3.40-3.97)	3.4	3.97	2.07	22.41%	0.26%	90.45%	9.29%	1.60	27.05
RC-421 (0.00-1.00)	0	1	1.79	32.85%	16.33%	38.69%	44.98%	1.20	4.60
RC-421 (1.00-1.85)	1	1.85	1.61	32.52%	1.41%	48.12%	50.47%	1.08	10.71
RC-422 (0.00-1.00)	0	1	1.99	29.30%	6.21%	38.02%	55.77%	1.41	3.63
RC-422 (1.00-1.66)	1	1.66	1.55	39.01%	7.94%	24.87%	67.20%	0.95	7.06
RC-426 (0.00-1.20)	0	1.2	1.75	20.67%	5.47%	70.03%	24.50%	1.39	6.81
RC-426 (1.20-2.40)	1.2	2.4	1.37	38.00%	12.68%	10.42%	76.90%	0.85	4.98
RC-426 (2.40-3.58)	2.4	3.58	1.14	55.52%	3.34%	25.06%	71.61%	0.51	6.58
RC-427 (0.00-1.00)	0	1	1.83	28.26%	5.46%	59.93%	34.61%	1.31	4.95
RC-427 (1.00-1.93)	1	1.93	1.49	34.29%	1.33%	23.04%	75.63%	0.98	5.19
RC-425 (0.00-1.00)	0	1							
RC-425 (1.00-2.00)	1	2	1.75	26.78%	5.55%	50.77%	43.67%	1.28	4.65
RC-425 (2.00-3.00)	2	3	1.88	26.30%	0.24%	61.81%	37.94%	1.39	15.40
RC-425 (3.00-3.90)	3	3.9	1.83	25.16%	0.48%	76.29%	23.23%	1.37	19.60
RC-424 (0.00-1.20)	0	1.2							
RC-424 (1.20-2.40)	1.2	2.4	1.75	26.94%	7.49%	44.58%	47.93%	1.28	6.00
RC-424 (2.40-3.60)	2.4	3.6	1.79	26.91%	0.32%	64.55%	35.12%	1.31	17.32
RC-428 (0.00-1.20)	0	1.2	1.83	19.92%	2.97%	69.59%	27.44%	1.46	2.04
RC-428 (1.20-2.20)	1.2	2.2	2.16	22.03%	9.76%	73.91%	16.33%	1.68	20.09
RC-429 (0.00-1.20)	0	1.2	1.83	23.45%	4.63%	61.38%	33.99%	1.40	6.66
RC-429 (1.20-2.37)	1.2	2.37	1.46	36.00%	1.34%	78.69%	19.96%	0.93	13.39
RC-430 (0.00-1.20)	0	1.2							
RC-430 (1.20-2.40)	1.2	2.4	1.73	22.68%	7.19%	52.37%	40.44%	1.34	4.51
RC-431 (0.00-1.20)	0	1.2							
RC-400 (0.00-1.00)	0	1	1.70	23.92%	15.69%	47.75%	36.55%	1.29	4.54
RC-400 (1.00-2.00)	1	2							
RC-400 (2.00-2.58)	2	2.58							
RC-401 (0.00-1.00)	0	1							
RC-401 (1.00-1.64)	1	1.64	1.64	34.07%	7.87%	23.58%	68.54%	1.08	6.14
RC-398 (0.00-1.20)	0	1.2							
RC-398 (1.20-2.40)	1.2	2.4	1.92	29.64%	20.91%	43.68%	35.41%	1.35	6.40
RC-398 (2.40-3.60)	2.4	3.6	1.55	32.81%	1.50%	45.58%	52.92%	1.04	13.38
RC-398 (3.60-4.60)	3.6	4.6	2.03	24.52%	0.62%	72.60%	26.78%	1.53	20.83
RC-397 (0.00-1.00)	0	1	2.01	21.72%	4.88%	71.94%	23.18%	1.57	4.44
RC-397 (1.00-2.00)	1	2	2.03	22.96%	1.71%	79.98%	18.31%	1.56	21.99
RC-397 (2.00-2.84)	2	2.84	2.12	20.58%	0.32%	86.71%	12.97%	1.69	27.88
RC-394 (0.00-1.20)	0	1.2							
RC-394 (1.20-2.40)	1.2	2.4	1.97	19.01%	9.83%	71.26%	18.91%	1.60	9.47

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-394 (2.40-3.60)	2.4	3.6	1.72	32.11%	4.23%	78.29%	17.47%	1.17	11.10
RC-394 (3.60-4.34)	3.6	4.34							
RC-396 (0.00-1.20)	0	1.2							
RC-396 (1.20-2.40)	1.2	2.4	1.81	19.66%	2.98%	63.62%	33.40%	1.45	9.33
RC-396 (2.40-3.60)	2.4	3.6	1.70	29.39%	13.97%	64.63%	21.39%	1.20	6.32
RC-396 (3.60-4.10)	3.6	4.1							
RC-395 (0.00-1.20)	0	1.2							
RC-395 (1.20-2.40)	1.2	2.4							
RC-395 (2.40-3.60)	2.4	3.6	2.05	22.36%	6.46%	56.62%	36.92%	1.59	5.69
RC-395 (3.60-4.51)	3.6	4.51							
RC-728 (0.00-1.00)	0	1	1.70	24.34%	12.22%	78.50%	9.28%	1.28	19.70
RC-728 (1.00-2.00)	1	2	1.85	26.11%	0.51%	87.71%	11.78%	1.36	23.62
RC-728 (2.00-3.00)	2	3	1.72	22.21%	2.29%	87.43%	10.28%	1.33	8.97
RC-728 (3.00-3.90)	3	3.9							
RC-729 (0.00-1.00)	0	1	2.09	25.31%	10.48%	62.44%	27.08%	1.56	11.09
RC-729 (1.00-2.00)	1	2	1.99	23.82%	0.47%	73.05%	26.48%	1.52	18.38
RC-729 (2.00-3.00)	2	3	1.53	27.48%	0.26%	73.93%	25.81%	1.11	20.62
RC-729 (3.00-4.00)	3	4	1.64	25.64%	0.42%	84.03%	15.55%	1.22	23.87
RC-730 (0.00-1.00)	0	1	1.64	23.83%	14.85%	73.43%	11.71%	1.25	14.16
RC-730 (1.00-2.00)	1	2	2.09	17.56%	12.40%	75.32%	12.29%	1.72	4.34
RC-730 (2.00-3.00)	2	3							
RC-730 (3.00-4.00)	3	4							
RC-732 (0.00-1.00)	0	1	1.97	20.64%	9.92%	77.87%	12.22%	1.57	19.90
RC-732 (1.00-2.00)	1	2	1.79	22.25%	4.71%	87.16%	8.13%	1.39	21.99
RC-732 (2.00-3.00)	2	3							
RC-732 (3.00-3.60)	3	3.6							
RC-733 (0.00-1.00)	0	1	2.05	24.43%	9.92%	62.57%	27.51%	1.55	9.87
RC-733 (1.00-2.00)	1	2	1.64	24.07%	0.22%	64.83%	34.95%	1.25	14.65
RC-733 (2.00-2.50)	2	2.5	1.68	24.21%	0.23%	72.17%	27.60%	1.27	17.72
RC-734 (0.00-1.00)	0	1	1.66	25.75%	22.60%	56.26%	21.15%	1.23	7.61
RC-734 (1.00-2.00)	1	2	1.55	35.76%	0.62%	51.18%	48.20%	1.00	13.94
RC-734 (2.00-2.50)	2	2.5	1.68	29.86%	0.17%	46.04%	53.79%	1.18	12.26
RC-736 (0.00-1.00)	0	1	1.96	27.29%	9.16%	56.92%	33.92%	1.42	11.04
RC-737 (0.00-1.00)	0	1	1.77	29.23%	7.84%	54.35%	37.81%	1.25	10.88
RC-737 (1.00-2.00)	1	2	1.27	39.01%	0.34%	46.18%	53.48%	0.78	13.12
RC-737 (2.00-3.00)	2	3	1.16	43.33%	0.20%	48.22%	51.58%	0.66	14.40
RC-738 (0.00-1.00)	0	1							
RC-738 (1.00-2.00)	1	2							
RC-738 (2.00-3.00)	2	3							
RC-738 (3.00-4.00)	3	4							
RC-739 (0.00-1.00)	0	1	1.92	23.18%	9.94%	49.66%	40.40%	1.47	11.45
RC-739 (1.00-2.00)	1	2	1.88	26.88%	0.60%	67.60%	31.79%	1.38	14.36
RC-739 (2.00-3.00)	2	3	1.72	25.40%	0.09%	56.45%	43.47%	1.28	12.46

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-740 (0.00-1.00)	0	1	1.86	21.73%	18.22%	62.56%	19.21%	1.46	6.42
RC-740 (1.00-2.00)	1	2	1.99	29.43%	21.92%	50.74%	27.34%	1.41	7.82
RC-740 (2.00-3.00)	2	3	1.64	32.27%	0.97%	50.59%	48.44%	1.11	11.42
RC-740 (3.00-4.00)	3	4	1.81	29.13%	0.33%	61.40%	38.27%	1.28	12.94
RC-740 (4.00-5.00)	4	5	1.88	23.64%	0.30%	70.70%	29.00%	1.44	17.97
RC-741 (0.00-1.00)	0	1	1.92	24.67%	5.86%	80.70%	13.44%	1.45	20.24
RC-741 (1.00-2.00)	1	2	1.77	26.43%	0.89%	88.80%	10.31%	1.30	26.00
RC-741 (2.00-3.00)	2	3	1.96	33.16%	0.43%	80.59%	18.98%	1.31	25.10
RC-741 (3.00-3.70)	3	3.7	1.94	30.14%	2.11%	82.51%	15.38%	1.35	8.90
RC-742 (0.00-1.00)	0	1	1.86	21.80%	6.47%	77.40%	16.13%	1.46	19.14
RC-742 (1.00-2.00)	1	2	2.07	24.34%	1.32%	81.92%	16.76%	1.56	25.24
RC-742 (2.00-3.00)	2	3	1.97	27.00%	0.46%	63.76%	35.78%	1.44	20.42
RC-742 (3.00-3.70)	3	3.7	1.73	25.26%	0.35%	71.56%	28.09%	1.30	22.85
RC-743 (0.00-1.00)	0	1	1.96	21.70%	13.05%	50.78%	36.18%	1.53	8.92
RC-743 (1.00-2.00)	1	2	1.81	29.09%	0.65%	63.52%	35.82%	1.28	18.53
RC-743 (2.00-3.00)	2	3	1.83	24.88%	0.17%	65.81%	34.02%	1.37	19.02
RC-743 (3.00-4.00)	3	4	1.96	23.05%	0.30%	85.77%	13.93%	1.51	24.77
RC-743 (4.00-5.00)	4	5	1.86	23.45%	0.32%	85.46%	14.22%	1.43	25.81
RC-743 (5.00-5.70)	5	5.7	1.90	24.55%	0.58%	69.22%	30.21%	1.43	21.78
RC-744 (0.00-1.00)	0	1	1.92	20.68%	34.24%	52.45%	13.31%	1.52	9.06
RC-745 (0.00-1.00)	0	1	2.12	25.39%	16.60%	63.84%	19.57%	1.58	11.13
RC-745 (1.00-2.00)	1	2	2.07	24.72%	0.28%	72.64%	27.08%	1.56	17.90
RC-745 (2.00-3.00)	2	3	1.88	28.19%	1.28%	68.02%	30.70%	1.35	20.38
RC-745 (3.00-4.00)	3	4	1.66	34.05%	0.19%	69.48%	30.32%	1.10	20.37
RC-745 (4.00-4.60)	4	4.6	2.07	26.65%	0.27%	82.38%	17.35%	1.52	23.98
RC-746 (0.00-1.00)	0	1	2.16	23.41%	13.57%	73.15%	13.27%	1.65	16.36
RC-746 (1.00-2.00)	1	2	1.97	26.68%	2.17%	85.03%	12.80%	1.45	25.24
RC-746 (2.00-3.00)	2	3	1.92	28.81%	0.22%	89.47%	10.32%	1.37	27.35
RC-746 (3.00-4.00)	3	4	1.64	41.27%	0.35%	72.29%	27.36%	0.96	22.97
RC-746 (4.00-4.50)	4	4.5	1.51	39.66%	0.15%	70.09%	29.76%	0.91	19.85
RC-747 (0.00-1.00)	0	1							
RC-747 (1.00-2.00)	1	2							
RC-747 (2.00-3.00)	2	3							
RC-747 (3.00-4.00)	3	4							
RC-747 (4.00-4.90)	4	4.9							
RC-748 (0.00-1.00)	0	1							
RC-749 (0.00-1.00)	0	1							
RC-749 (1.00-2.00)	1	2							
RC-749 (2.00-3.00)	2	3							
RC-749 (3.00-3.90)	3	3.9							
RC-750 (0.00-1.00)	0	1							
RC-751 (0.00-1.00)	0	1	1.92	22.92%	10.73%	68.25%	21.02%	1.48	8.81
RC-751 (1.00-2.00)	1	2	1.86	20.12%	0.27%	90.00%	9.73%	1.49	26.05

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-751 (2.00-3.00)	2	3	2.03	19.50%	0.70%	86.99%	12.31%	1.63	24.10
RC-751 (3.00-4.00)	3	4	2.01	25.23%	0.44%	78.76%	20.80%	1.50	21.28
RC-751 (4.00-5.00)	4	5	2.07	21.74%	0.45%	89.28%	10.26%	1.62	27.62
RC-753 (0.00-0.70)	0	0.7	1.97	18.19%	10.42%	77.03%	12.55%	1.62	12.72
RC-754 (0.00-1.00)	0	1							
RC-755 (0.00-1.00)	0	1							
RC-757 (0.00-0.50)	0	0.5							
RC-758 (0.00-1.00)	0	1							
RC-758 (1.00-1.70)	1	1.7							
RC-759 (0.00-1.00)	0	1							
RC-759 (1.00-2.00)	1	2	1.79	47.06%	3.72%	74.34%	21.95%	0.95	11.08
RC-759 (2.00-3.00)	2	3							
RC-759 (3.00-4.00)	3	4							
RC-761 (0.00-1.00)	0	1							
RC-761 (1.00-2.00)	1	2							
RC-761 (2.00-3.00)	2	3							
RC-761 (3.00-3.60)	3	3.6							
RC-763 (0.00-1.00)	0	1							
RC-763 (1.00-2.00)	1	2							
RC-763 (2.00-3.00)	2	3							
RC-764 (0.00-1.00)	0	1							
RC-764 (1.00-2.00)	1	2	1.88	23.51%	8.86%	66.52%	24.62%	1.44	17.08
RC-764 (2.00-3.00)	2	3	2.10	21.92%	0.71%	86.24%	13.05%	1.64	23.77
RC-764 (3.00-4.00)	3	4	2.09	22.56%	0.27%	87.76%	11.97%	1.61	25.15
RC-764 (4.00-5.00)	4	5	1.88	30.74%	0.24%	74.83%	24.92%	1.30	21.44
RC-766 (0.00-1.00)	0	1							
RC-766 (1.00-2.00)	1	2							
RC-766 (2.00-2.70)	2	2.7							
RC-767 (0.00-1.00)	0	1							
RC-767 (1.00-2.00)	1	2							
RC-767 (2.00-2.90)	2	2.9							
RC-768 (0.00-1.00)	0	1							
RC-768 (1.00-2.00)	1	2							
RC-768 (2.00-3.00)	2	3							
RC-769 (0.00-1.00)	0	1							
RC-769 (1.00-2.00)	1	2							
RC-769 (2.00-2.60)	2	2.6							
RC-770 (0.00-1.00)	0	1							
RC-770 (1.00-2.00)	1	2							
RC-770 (2.00-3.00)	2	3	1.53	31.60%	0.15%	44.97%	54.88%	1.05	14.09
RC-771 (0.00-1.00)	0	1							
RC-771 (1.00-2.00)	1	2	1.99	21.50%	6.10%	66.47%	27.44%	1.56	13.76
RC-771 (2.00-3.00)	2	3	1.92	26.65%	0.89%	86.43%	12.68%	1.41	13.09

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-771 (3.00-4.00)	3	4							
RC-771 (4.00-5.00)	4	5							
RC-772 (0.00-1.00)	0	1							
RC-772 (1.00-2.00)	1	2							
RC-772 (2.00-3.00)	2	3							
RC-772 (3.00-4.00)	3	4							
RC-772 (4.00-4.70)	4	4.7							
RC-773 (0.00-1.00)	0	1	2.20	23.18%	6.78%	52.45%	40.78%	1.69	9.12
RC-773 (1.00-2.00)	1	2	2.05	23.09%	10.05%	75.08%	14.87%	1.58	18.07
RC-773 (2.00-3.00)	2	3	1.66	23.94%	0.77%	88.24%	10.99%	1.26	10.17
RC-773 (3.00-4.00)	3	4							
RC-774 (0.00-1.00)	0	1	1.94	23.29%	10.21%	59.39%	30.40%	1.49	7.04
RC-775 (0.00-1.00)	0	1	1.75	24.63%	9.82%	54.02%	36.16%	1.32	8.03
RC-775 (1.00-2.00)	1	2	1.59	24.68%	0.84%	63.62%	35.54%	1.20	17.30
RC-775 (2.00-3.00)	2	3	1.99	21.92%	9.44%	69.85%	20.71%	1.56	22.20
RC-775 (3.00-3.60)	3	3.6	1.83	18.92%	9.82%	73.97%	16.21%	1.48	23.98
RC-776 (0.00-1.00)	0	1	2.05	26.57%	13.66%	70.30%	16.04%	1.50	15.61
RC-776 (1.00-2.00)	1	2	2.09	21.84%	8.03%	69.99%	21.98%	1.63	18.32
RC-776 (2.00-3.00)	2	3	1.90	23.02%	0.56%	87.42%	12.02%	1.46	24.48
RC-776 (3.00-3.80)	3	3.8	1.83	23.41%	0.79%	84.86%	14.34%	1.40	21.39
RC-780 (0.00-1.00)	0	1	1.75	28.76%	2.68%	50.11%	47.20%	1.25	9.60
RC-780 (1.00-2.00)	1	2	2.40	21.76%	14.45%	60.22%	25.33%	1.88	11.89
RC-780 (2.00-3.00)	2	3							
RC-780 (3.00-3.60)	3	3.6							
RC-781 (0.00-1.00)	0	1	2.25	25.33%	3.22%	53.99%	42.79%	1.68	9.60
RC-781 (1.00-2.00)	1	2	2.53	20.80%	11.23%	65.97%	22.80%	2.00	12.11
RC-781 (2.00-2.70)	2	2.7	1.99	18.60%	12.56%	71.30%	16.14%	1.62	10.34
RC-782 (0.00-1.00)	0	1	2.21	22.84%	8.54%	66.91%	24.55%	1.71	15.02
RC-782 (1.00-2.00)	1	2	2.05	19.76%	15.34%	67.21%	17.45%	1.64	17.29
RC-782 (2.00-3.00)	2	3	2.10	26.24%	2.46%	83.75%	13.79%	1.55	21.42
RC-783 (0.00-1.00)	0	1	2.34	26.94%	5.87%	55.92%	38.22%	1.71	7.56
RC-783 (1.00-2.00)	1	2	2.14	20.10%	15.26%	61.75%	22.99%	1.71	9.74
RC-783 (2.00-3.00)	2	3							
RC-783 (3.00-3.50)	3	3.5							
RC-784 (0.00-1.00)	0	1							
RC-784 (1.00-2.00)	1	2							
RC-784 (2.00-2.50)	2	2.5							
RC-785 (0.00-1.00)	0	1							
RC-785 (1.00-2.00)	1	2	1.99	19.04%	3.24%	71.12%	25.63%	1.61	8.21
RC-785 (2.00-3.00)	2	3							
RC-785 (3.00-4.00)	3	4							
RC-785 (4.00-5.00)	4	5							
RC-216 (0.00-1.00)	0	1							

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-216 (1.00-2.00)	1	2							
RC-216 (2.00-2.77)	2	2.77							
RC-239 (0.00-1.00)	0	1							
RC-239 (1.00-2.00)	1	2	1.62	33.00%	2.27%	59.33%	38.41%	1.09	14.37
RC-239 (2.00-2.71)	2	2.71	1.64	31.11%	0.38%	51.89%	47.73%	1.13	12.24
RC-246 (0.00-1.00)	0	1							
RC-246 (2.00-2.28)	2	2.28	1.62	14.91%	39.19%	50.76%	10.05%	1.38	15.96
RC-283 (0.00-1.00)	0	1							
RC-283 (1.00-2.00)	1	2	1.46	31.16%	1.88%	43.44%	54.68%	1.00	12.12
RC-283 (2.00-3.04)	2	3.04	1.44	26.10%	0.16%	62.66%	37.18%	1.06	17.35
RC-286 (0.00-1.00)	0	1							
RC-286 (1.00-2.00)	1	2	1.51	26.96%	11.17%	53.06%	35.78%	1.11	12.84
RC-286 (2.00-3.00)	2	3	1.86	20.32%	0.29%	80.67%	19.04%	1.49	21.39
RC-286 (3.00-4.16)	3	4.16	1.68	18.28%	0.55%	84.12%	15.33%	1.37	23.66
RC-287 (0.00-1.00)	0	1							
RC-287 (1.00-2.00)	1	2	1.83	16.52%	8.93%	62.75%	28.32%	1.53	10.61
RC-287 (2.00-3.00)	2	3	1.96	24.28%	5.48%	80.10%	14.42%	1.48	22.40
RC-287 (3.00-4.19)	3	4.19	1.85	22.71%	0.84%	78.91%	20.25%	1.43	8.70
RC-288 (0.00-0.75)	0	0.75							
RC-288 (0.75-1.75)	0.75	1.75							
RC-288 (1.75-2.75)	1.75	2.75							
RC-288 (2.75-3.75)	2.75	3.75							
RC-288 (3.75-4.75)	3.75	4.75							
RC-288 (4.75-5.07)	4.75	5.07							
RC-290 (0.00-1.00)	0	1							
RC-290 (1.00-2.00)	1	2							
RC-290 (2.00-3.00)	2	3							
RC-290 (3.00-3.80)	3	3.8							
RC-291 (0.00-1.00)	0	1							
RC-291 (1.00-2.00)	1	2							
RC-291 (2.00-2.95)	2	2.95							
RC-301 (0.00-1.00)	0	1							
RC-301 (1.00-1.45)	1	1.45							
RC-310 (0.00-1.00)	0	1	1.83	22.50%	26.46%	51.65%	21.89%	1.42	9.72
RC-310 (1.00-2.00)	1	2	1.57	23.52%	1.52%	61.95%	36.53%	1.20	11.64
RC-310 (2.00-3.00)	2	3	1.42	24.94%	0.19%	47.17%	52.65%	1.07	11.96
RC-310 (3.00-4.00)	3	4	1.46	27.52%	0.13%	51.82%	48.06%	1.06	13.41
RC-324 (0.00-1.00)	0	1							
RC-324 (1.00-2.00)	1	2							
RC-324 (2.00-3.00)	2	3	1.83	16.63%	4.83%	61.01%	34.15%	1.52	10.87
RC-324 (3.00-4.00)	3	4	1.85	21.24%	23.99%	52.74%	23.27%	1.45	11.74
RC-324 (4.00-5.00)	4	5							
RC-324 (5.00-6.00)	5	6							

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-325 (0.00-1.10)	0	1.1							
RC-325 (1.10-2.24)	1.1	2.24							
RC-325 (2.24-3.00)	2.24	3							
RC-325 (3.00-4.00)	3	4							
RC-325 (4.00-5.12)	4	5.12							
RC-328 (0.00-1.00)	0	1							
RC-328 (1.00-2.00)	1	2							
RC-328 (2.00-3.00)	2	3							
RC-328 (3.00-4.13)	3	4.13	1.64	31.44%	0.55%	50.38%	49.07%	1.13	14.61
RC-366 (0.00-1.20)	0	1.2	1.83	22.19%	4.92%	77.32%	17.75%	1.42	20.27
RC-366 (1.20-2.40)	1.2	2.4	1.97	21.93%	0.42%	85.45%	14.13%	1.54	22.50
RC-366 (2.40-3.55)	2.4	3.55	1.92	20.59%	0.44%	84.80%	14.75%	1.52	23.79
RC-371 (0.00-1.00)	0	1							
RC-371 (1.00-2.00)	1	2							
RC-371 (2.00-3.00)	2	3	1.40	34.19%	0.50%	47.11%	52.39%	0.92	9.17
RC-371 (3.00-3.76)	3	3.76	1.16	36.59%	0.33%	43.56%	56.11%	0.74	9.63
RC-373 (0.00-1.00)	0	1							
RC-373 (1.20-2.40)	1.2	2.4	1.73	23.68%	0.78%	49.31%	49.92%	1.32	9.35
RC-373 (2.40-3.40)	2.4	3.4	1.77	24.70%	0.61%	54.11%	45.28%	1.33	13.70
RC-373 (3.40-4.33)	3.4	4.33	1.77	21.60%	0.26%	64.49%	35.25%	1.39	14.87
RC-378 (0.00-1.20)	0	1.2							
RC-378 (1.20-2.00)	1.2	2	1.59	42.29%	1.91%	45.57%	52.52%	0.92	11.16
RC-414 (0.00-1.20)	0	1.2							
RC-414 (1.20-2.40)	1.2	2.4	1.81	19.25%	3.16%	83.38%	13.46%	1.46	16.36
RC-414 (2.40-3.60)	2.4	3.6	1.99	20.30%	0.83%	84.94%	14.23%	1.59	23.18
RC-414 (3.60-4.44)	3.6	4.44	1.90	19.32%	0.44%	87.52%	12.04%	1.53	24.63
RC-415 (0.00-1.00)	0	1							
RC-415 (1.00-2.00)	1	2							
RC-415 (2.00-2.90)	2	2.9							
RC-432 (0.00-1.20)	0	1.2							
RC-432 (1.20-2.40)	1.2	2.4	1.94	23.24%	7.40%	75.66%	16.94%	1.49	18.36
RC-432 (2.40-3.60)	2.4	3.6	1.97	19.26%	0.23%	60.02%	39.75%	1.59	17.78
RC-432 (3.60-4.71)	3.6	4.71	1.92	20.21%	0.32%	70.98%	28.70%	1.53	20.33
RC-434 (0.00-1.00)	0	1							
RC-434 (1.00-2.00)	1	2	1.35	30.84%	0.21%	29.13%	70.66%	0.93	9.03
RC-434 (2.00-2.83)	2	2.83	1.59	26.24%	0.22%	48.67%	51.11%	1.17	14.09
RC-435 (0.00-1.00)	0	1							
RC-435 (1.00-2.00)	1	2							
RC-435 (2.00-2.80)	2	2.8							
RC-436 (0.00-1.20)	0	1.2							
RC-436 (1.20-2.40)	1.2	2.4	1.97	21.19%	2.38%	86.72%	10.90%	1.56	24.37
RC-436 (2.40-3.60)	2.4	3.6	1.88	22.24%	1.55%	78.72%	19.73%	1.46	10.60
RC-437 (0.00-1.20)	0	1.2							

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-437 (1.20-2.40)	1.2	2.4							
RC-438 (0.00-1.10)	0	1.1							
RC-438 (1.10-2.03)	1.1	2.03							
RC-439 (0.00-1.20)	0	1.2							
RC-439 (1.20-2.40)	1.2	2.4	1.92	21.48%	7.90%	76.82%	15.27%	1.51	22.51
RC-440 (0.00-1.00)	0	1							
RC-440 (1.00-2.00)	1	2	1.64	29.40%	10.24%	62.60%	27.16%	1.16	19.42
RC-440 (2.00-3.02)	2	3.02	1.75	25.96%	0.18%	70.54%	29.28%	1.30	19.69
RC-441 (0.00-1.00)	0	1							
RC-441 (1.00-2.00)	1	2							
RC-441 (2.00-2.70)	2	2.7							
RC-442 (1.00-2.02)	1	2.02							
RC-443 (0.00-1.00)	0	1							
RC-443 (1.00-2.00)	1	2							
RC-443 (2.00-2.94)	2	2.94							
RC-444 (0.00-1.00)	0	1							
RC-444 (1.00-2.00)	1	2							
RC-447 (0.00-1.20)	0	1.2	2.09	21.94%	7.62%	60.74%	31.64%	1.63	13.49
RC-447 (1.20-2.40)	1.2	2.4	2.09	22.50%	2.43%	79.72%	17.85%	1.62	22.27
RC-447 (2.40-3.60)	2.4	3.6	2.09	19.90%	0.50%	86.95%	12.54%	1.67	23.04
RC-448 (0.00-1.20)	0	1.2	1.90	23.36%	17.91%	57.49%	24.60%	1.46	10.01
RC-448 (1.20-2.40)	1.2	2.4	1.70	38.14%	7.58%	28.38%	64.04%	1.05	9.13
RC-448 (2.40-3.60)	2.4	3.6	1.46	36.91%	1.75%	39.33%	58.92%	0.92	12.42
RC-448 (3.60-4.33)	3.6	4.33	1.79	28.79%	0.57%	60.93%	38.50%	1.27	17.33
RC-449 (0.00-1.00)	0	1							
RC-449 (1.00-2.00)	1	2							
RC-449 (2.00-3.02)	2	3.02							
RC-451 (0.00-1.20)	0	1.2	2.09	21.08%	15.36%	61.46%	23.18%	1.65	15.73
RC-451 (1.20-2.40)	1.2	2.4	1.94	22.70%	1.03%	87.16%	11.81%	1.50	18.32
RC-451 (2.40-3.40)	2.4	3.4							
RC-451 (3.40-4.14)	3.4	4.14							
RC-452 (0.00-1.20)	0	1.2	2.03	21.46%	13.30%	65.79%	20.91%	1.59	14.63
RC-452 (1.20-2.40)	1.2	2.4							
RC-452 (2.40-3.60)	2.4	3.6							
RC-452 (3.60-4.63)	3.6	4.63							
RC-453 (0.00-1.20)	0	1.2	2.18	25.07%	6.67%	54.91%	38.42%	1.63	10.52
RC-453 (1.20-2.40)	1.2	2.4							
RC-453 (2.40-3.56)	2.4	3.56							
RC-604 (0.00-1.20)	0	1.2							
RC-604 (1.20-2.40)	1.2	2.4							
RC-604 (2.40-3.45)	2.4	3.45							
RC-445 (0.00-1.00)	0	1							
RC-445 (1.00-2.00)	1	2							

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-445 (2.00-2.60)	2	2.6							
RC-251 (0.00-1.00)	0.00	1.00	1.88	23.61%					
RC-251 (1.00-2.00)	1.00	2.00	1.38	30.18%	3.81%	39.59%	56.60%	0.97	12.37
RC-251 (2.00-2.65)	2.00	2.65	1.62	28.92%	0.68%	60.09%	39.23%	1.15	18.00
RC-260 (0.00-1.00)	0.00	1.00	1.53	43.03%					
RC-260 (1.00-2.00)	1.00	2.00	1.79	35.47%					
RC-260 (2.00-3.00)	2.00	3.00	1.72	19.56%					
RC-260 (3.00-4.00)	3.00	4.00	1.86	16.55%	6.94%	58.52%	34.54%	1.56	8.40
RC-260 (4.00-5.00)	4.00	5.00	1.68	20.64%	2.44%	68.98%	28.58%	1.33	21.71
RC-260 (5.00-5.44)	5.00	5.44	1.59	18.96%	0.52%	77.12%	22.35%	1.29	23.88
RC-262 (0.00-1.00)	0.00	1.00	1.88	23.57%					
RC-262 (1.00-2.00)	1.00	2.00	1.72	17.55%	13.31%	61.64%	25.05%	1.42	14.44
RC-262 (2.00-2.63)	2.00	2.63	1.61	23.53%	0.63%	82.48%	16.88%	1.23	25.82
RC-292 (0.00-1.00)	0.00	1.00	1.31	38.61%					
RC-292 (1.00-1.90)	1.00	1.90	1.59	44.26%					
RC-292 (2.10-3.00)	2.10	3.00	1.73	38.26%					
RC-292 (3.00-4.00)	3.00	4.00	1.86	22.04%					
RC-292 (4.00-5.10)	4.00	5.10	1.68	19.68%					
RC-295 (0.00-1.00)	0.00	1.00	1.85	24.88%					
RC-295 (1.00-2.00)	1.00	2.00	1.48	30.00%					
RC-295 (2.00-3.00)	2.00	3.00	1.31	32.44%					
RC-295 (3.00-3.48)	3.00	3.48	1.33	30.96%					
RC-344 (0.00-1.14)	0.00	1.14	1.61	34.76%					
RC-344 (1.14-2.28)	1.14	2.28	1.96	20.88%					
RC-344 (2.28-3.20)	2.28	3.20	2.07	19.40%	24.21%	54.13%	21.66%	1.67	17.18
RC-344 (3.40-4.40)	3.40	4.40	1.83	21.88%	0.47%	83.21%	16.32%	1.43	26.20
RC-344 (4.40-5.00)	4.40	5.00	1.70	34.52%	0.31%	79.38%	20.31%	1.11	25.39
RC-345 (0.00-1.00)	0.00	1.00	1.64	38.88%					
RC-345 (1.00-2.00)	1.00	2.00	1.83	23.08%					
RC-345 (2.00-3.00)	2.00	3.00	1.90	18.08%					
RC-345 (3.00-4.00)	3.00	4.00	1.59	41.40%	16.42%	40.34%	43.24%	0.93	11.76
RC-345 (4.00-4.69)	4.00	4.69	1.13	57.72%	1.08%	38.00%	60.93%	0.48	12.68
RC-346 (0.00-1.00)	0.00	1.00	1.77	34.68%					
RC-346 (1.00-2.00)	1.00	2.00	2.07	21.84%					
RC-346 (2.00-3.00)	2.00	3.00	1.85	19.00%					
RC-346 (3.00-4.00)	3.00	4.00	1.72	18.47%					
RC-346 (4.00-4.90)	4.00	4.90	1.46	29.68%	10.06%	50.87%	39.07%	1.03	14.56
RC-347 (0.00-1.00)	0.00	1.00	1.62	37.44%					
RC-347 (1.00-2.00)	1.00	2.00	1.66	22.44%					
RC-347 (2.00-3.00)	2.00	3.00	1.79	20.11%					
RC-347 (3.00-4.00)	3.00	4.00	1.75	20.88%					
RC-347 (4.00-4.39)	4.00	4.39	1.81	22.17%					
RC-348 (0.00-1.00)	0.00	1.00	1.70	26.75%					

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-348 (1.00-2.00)	1.00	2.00	1.75	21.44%					
RC-348 (2.00-3.00)	2.00	3.00	1.73	20.01%					
RC-348 (3.00-4.20)	3.00	4.20	1.97	16.53%	5.32%	61.47%	33.21%	1.65	10.43
RC-353 (0.00-1.00)	0.00	1.00	1.70	36.49%					
RC-353 (1.00-2.00)	1.00	2.00	1.99	18.72%					
RC-353 (2.00-3.00)	2.00	3.00	1.44	33.40%					
RC-353 (3.00-4.00)	3.00	4.00	1.55	32.36%					
RC-353 (4.00-4.40)	4.00	4.40	1.57	27.70%					
RC-355 (0.00-1.00)	0.00	1.00	1.75	41.29%					
RC-355 (1.00-2.00)	1.00	2.00	1.48	40.25%					
RC-355 (2.00-3.00)	2.00	3.00	1.81	19.86%					
RC-355 (3.00-4.00)	3.00	4.00	1.77	22.81%	6.28%	50.17%	43.55%	1.37	11.06
RC-355 (4.00-5.00)	4.00	5.00	1.86	21.61%	1.23%	67.80%	30.97%	1.46	20.09
RC-355 (5.00-5.50)	5.00	5.50	1.81	20.68%	0.53%	77.23%	22.24%	1.43	24.12
RC-356 (0.00-1.00)	0.00	1.00	1.57	39.12%					
RC-356 (1.00-1.73)	1.00	1.73	1.68	28.79%					
RC-356 (1.73-2.80)	1.73	2.80	1.55	21.27%					
RC-356 (2.80-3.60)	2.80	3.60	1.46	31.25%					
RC-356 (3.60-4.60)	3.60	4.60	1.59	25.94%	2.25%	56.51%	41.24%	1.18	16.38
RC-356 (4.60-5.50)	4.60	5.50	1.62	21.97%	1.17%	68.18%	30.65%	1.27	19.50
RC-357 (0.00-1.00)	0.00	1.00	1.59	42.68%					
RC-357 (1.00-2.00)	1.00	2.00	1.64	38.93%					
RC-357 (2.00-3.00)	2.00	3.00	1.93	23.28%					
RC-358 (0.00-1.00)	0.00	1.00	1.49	37.65%					
RC-358 (1.00-2.00)	1.00	2.00	1.66	41.38%					
RC-358 (2.00-3.00)	2.00	3.00	1.75	20.20%					
RC-358 (3.00-4.00)	3.00	4.00	1.83	18.26%					
RC-359 (0.00-1.00)	0.00	1.00	1.59	39.37%					
RC-359 (1.00-2.00)	1.00	2.00	1.49	38.86%					
RC-359 (2.00-3.00)	2.00	3.00	1.51	37.24%					
RC-359 (3.00-4.00)	3.00	4.00	1.68	23.22%					
RC-359 (4.00-5.00)	4.00	5.00	1.94	18.36%					
RC-359 (5.00-5.71)	5.00	5.71	1.88	16.43%	11.98%	57.07%	30.94%	1.57	12.48
RC-360 (0.00-1.00)	1.00	2.00	1.73	36.88%					
RC-360 (1.00-2.00)	1.00	2.00	1.73	36.88%					
RC-360 (2.00-3.00)	2.00	3.00	1.64	22.12%					
RC-360 (3.00-4.00)	3.00	4.00	1.81	20.84%					
RC-360 (4.00-4.60)	4.00	4.60	1.79	19.77%					
RC-361 (0.00-0.73)	0.00	0.73	1.40	40.52%					
RC-361 (0.73-1.39)	0.73	1.39	1.70	45.28%					
RC-361 (1.39-2.39)	1.39	2.39	2.01	28.39%					
RC-361 (2.39-3.39)	2.39	3.39	1.77	19.76%					
RC-361 (3.39-4.39)	3.39	4.39	1.83	19.36%					

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P_2O_5
RC-361 (4.39-5.39)	4.39	5.39	1.86	17.87%					
RC-455 (0.00-1.20)	0.00	1.20	1.92	24.23%	10.48%	37.97%	51.55%	1.45	7.69
RC-455 (1.20-2.40)	1.20	2.40	1.29	27.59%	0.75%	56.92%	42.33%	0.94	16.05
RC-455 (2.40-3.60)	2.40	3.60	1.40	19.91%	0.29%	78.86%	20.85%	1.12	22.87
RC-455 (3.60-4.60)	3.60	4.60	1.68	18.47%	0.19%	85.30%	14.51%	1.37	24.33
RC-455 (4.60-5.23)	4.60	5.23	1.81	20.16%	0.24%	87.28%	12.47%	1.44	24.70
RC-456 (0.00-1.00)	0.00	1.00	1.29	31.25%	8.51%	38.05%	53.44%	0.89	7.83
RC-456 (1.00-2.00)	1.00	2.00	1.18	28.68%	0.95%	45.31%	53.74%	0.84	13.94
RC-456 (2.00-3.00)	2.00	3.00	1.79	24.48%	0.51%	73.61%	25.88%	1.35	21.03
RC-456 (3.00-4.00)	3.00	4.00	2.03	19.83%	0.26%	78.02%	21.72%	1.63	22.71
RC-456 (4.00-5.20)	4.00	5.20	1.92	17.16%	0.19%	85.14%	14.67%	1.59	24.44
RC-457 (0.00-1.00)	0.00	1.00	2.12	25.01%					
RC-457 (1.00-2.00)	1.00	2.00	1.33	29.67%	2.46%	37.04%	60.50%	0.93	9.62
RC-457 (2.00-2.98)	2.00	2.98	1.44	31.34%	1.16%	27.64%	71.19%	0.99	9.65
RC-458 (0.00-1.00)	0.00	1.00	1.81	26.52%					
RC-458 (1.00-1.94)	1.00	1.94	1.72	29.76%					
RC-458 (1.94-3.00)	1.94	3.00	1.35	35.04%					
RC-458 (3.00-4.00)	3.00	4.00	1.14	31.60%	1.16%	24.33%	74.50%	0.78	8.45
RC-458 (4.00-5.16)	4.00	5.16	1.33	32.40%	0.62%	42.31%	57.07%	0.90	13.98
RC-459 (0.00-1.04)	0.00	1.04	1.42	42.12%					
RC-459 (1.04-2.20)	1.04	2.20	1.59	44.36%					
RC-459 (2.20-3.40)	2.20	3.40	1.72	23.32%					
RC-459 (3.40-4.61)	3.40	4.61	1.99	20.56%					
RC-460 (0.00-1.13)	0.00	1.13	1.37	45.12%					
RC-460 (1.13-2.00)	1.13	2.00	1.38	43.80%					
RC-460 (2.00-3.00)	2.00	3.00	1.55	37.02%					
RC-460 (3.00-4.00)	3.00	4.00	1.72	24.19%					
RC-460 (4.00-5.02)	4.00	5.02	1.64	21.32%					
RC-461 (0.00-1.00)	0.00	1.00	1.51	39.53%					
RC-461 (1.00-2.07)	1.00	2.07	1.48	41.22%					
RC-461 (2.07-3.00)	2.07	3.00	1.73	25.53%					
RC-461 (3.00-4.00)	3.00	4.00	1.64	21.35%					
RC-461 (4.00-5.00)	4.00	5.00	1.66	21.23%					
RC-462 (1.20-2.40)	1.20	2.40	1.70	35.64%					
RC-462 (2.40-3.60)	2.40	3.60	1.70	20.56%					
RC-462 (3.60-4.80)	3.60	4.80	1.72	19.26%					
RC-463 (1.00-2.20)	1.00	2.20	1.55	43.39%					
RC-463 (2.20-3.40)	2.20	3.40	1.68	28.27%					
RC-463 (3.40-4.63)	3.40	4.63	1.64	20.65%					
RC-464 (0.00-1.00)	0.00	1.00	1.77	40.95%					
RC-464 (1.00-2.23)	1.00	2.23	1.49	41.36%					
RC-464 (2.23-3.00)	2.23	3.00	1.75	25.00%					
RC-464 (3.00-4.00)	3.00	4.00	1.62	19.56%					

Hole	Top	Bottom	Wet Density	Moisture	Coarse	Feed	Fines	Dry Density	Ore % P2O5
RC-464 (4.00-4.77)	4.00	4.77	1.51	20.14%					
RC-590 (0.00-0.75)	0.00	0.75	1.62	37.95%					
RC-590 (0.75-1.95)	0.75	1.95	1.70	17.52%					
RC-590 (1.95-2.95)	1.95	2.95	1.62	17.92%					
RC-590 (2.95-3.95)	2.95	3.95	1.51	25.71%	12.37%	69.01%	18.62%	1.12	9.52
RC-590 (3.95-4.90)	3.95	4.90	1.59	18.92%					
RC-591 (0.00-1.20)	0.00	1.20	1.62	27.24%					
RC-591 (1.20-2.40)	1.20	2.40	1.79	19.50%	17.45%	47.34%	35.21%	1.44	9.18
RC-591 (2.40-3.60)	2.40	3.60	1.48	38.16%	3.18%	56.96%	39.86%	0.91	17.34
RC-591 (3.60-4.75)	3.60	4.75	1.73	21.36%					
RC-593 (0.00-1.20)	0.00	1.20	2.18	21.92%					
RC-593 (1.20-2.40)	1.20	2.40	1.46	29.42%	3.89%	28.49%	67.63%	1.03	8.99
RC-593 (2.40-3.60)	2.40	3.60	1.31	28.55%	0.89%	40.52%	58.59%	0.94	12.69
RC-593 (3.60-4.65)	3.60	4.65	1.68	22.75%	0.37%	70.29%	29.33%	1.30	20.46
RC-594 (0.00-1.20)	0.00	1.20	1.79	24.90%					
RC-594 (1.20-2.40)	1.20	2.40	1.40	32.80%	4.35%	26.69%	68.97%	0.94	7.05
RC-594 (2.40-3.60)	2.40	3.60	1.46	33.01%	0.96%	30.95%	68.09%	0.98	9.52
RC-594 (3.60-4.63)	3.60	4.63	1.46	31.11%	1.00%	45.23%	53.77%	1.00	14.07
RC-595 (0.00-1.20)	0.00	1.20	1.92	18.35%					
RC-595 (1.20-2.40)	1.20	2.40	1.55	33.41%					
RC-595 (2.40-3.61)	2.40	3.61	1.46	31.67%	0.96%	38.91%	60.13%	1.00	8.71
RC-596 (0.00-1.20)	0.00	1.20	1.85	19.67%	12.44%	59.13%	28.43%	1.48	10.29
RC-596 (1.20-2.40)	1.20	2.40	1.85	19.95%	2.31%	79.08%	18.61%	1.48	21.73
RC-596 (2.40-3.60)	2.40	3.60	1.81	16.03%	0.34%	89.72%	9.94%	1.52	25.59
RC-596 (3.60-4.83)	3.60	4.83	1.77	19.02%	0.24%	88.15%	11.61%	1.43	24.99
RC-598 (0.00-1.20)	0.00	1.20	1.73	16.23%	20.62%	52.30%	27.08%	1.45	12.29
RC-598 (1.20-2.40)	1.20	2.40	1.70	18.97%	1.37%	84.10%	14.54%	1.38	23.91
RC-598 (2.40-3.60)	2.40	3.60	1.49	18.16%	0.23%	87.08%	12.69%	1.22	24.50
RC-598 (3.60-4.80)	3.60	4.80	1.57	20.16%	0.32%	85.40%	14.28%	1.25	25.38
RC-600 (0.00-1.20)	0.00	1.20	1.86	21.81%	3.70%	38.84%	57.45%	1.46	8.25
RC-600 (1.20-2.40)	1.20	2.40	1.72	22.13%	4.59%	75.47%	19.93%	1.34	22.83
RC-600 (2.40-3.45)	2.40	3.45	1.68	21.34%	0.57%	87.12%	12.31%	1.32	13.95
RC-601 (0.00-1.20)	0.00	1.20	1.68	22.51%					
RC-601 (1.20-2.40)	1.20	2.40	1.85	18.88%					
RC-601 (2.40-3.60)	2.40	3.60	1.73	17.59%					
RC-601 (3.60-4.80)	3.60	4.80	1.70	24.87%					
RC-603 (0.00-1.20)	0.00	1.20	1.64	22.48%					
RC-603 (1.20-2.20)	1.20	2.20	1.75	15.66%	22.27%	63.92%	13.81%	1.48	9.27
RC-603 (2.20-3.10)	2.20	3.10	1.70	19.04%					

30.0 APPENDIX F: LIST OF FIPR CHEMICAL ASSAYS FOR THE ORE CHARACTERISTICS SAMPLES

Due to the lengthy content of Appendix F, it will be published in a separate volume.

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31.0 APPENDIX G: LIST OF DUPLICATE, BLANK AND STANDARDS CHEMICAL ASSAYS FOR QUALITY CONTROL

31.1 DUPLICATE STATICTICS, ASSAYS AND CHARTS

	Original Assay						Duplicate Assay					
	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
Average	19.96	26.21	0.85	0.67	0.73	32.63	19.98	26.71	0.85	0.67	0.72	32.69
Standard Deviation	9.40	25.34	0.38	0.46	0.40	12.61	9.41	25.34	0.38	0.46	0.39	12.61
Maximum	31.34	93.32	2.90	3.38	2.68	50.84	31.64	93.47	2.96	3.26	2.60	51.20
Minimum	0.42	0.17	0.10	0.16	0.17	1.11	0.44	0.27	0.10	0.17	0.18	1.12
Count	440	440	440	440	440	440	440	440	440	440	440	440
Correlation Coefficient	0.9993	0.9997	0.9976	0.9978	0.9917	0.9985						

Lab Phase 2		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-240 (0.00-1.00)	Head	10.77	36.74	0.80	0.63	0.75	29.98	10.64	36.22	0.85	0.68	0.82	29.77
RC-240 (1.00-2.00)	-65 +100	27.92	4.22	0.78	0.38	0.48	41.58	27.66	4.32	0.78	0.37	0.49	41.55
	-270	2.10	48.43	2.89	3.38	2.68	8.84	1.93	48.23	2.82	3.26	2.60	8.59
RC-240 (2.00-3.00)	Head	23.85	14.74	0.91	0.67	0.73	36.99	23.85	14.96	0.91	0.67	0.78	37.01
RC-240 (3.00-4.00)	Head	23.29	17.01	1.05	0.94	1.01	34.53	24.80	14.21	0.98	0.78	0.85	36.17
RC-240 (4.00-4.60)	Head	24.58	13.29	0.92	0.66	0.76	37.59	24.08	14.48	0.92	0.68	0.77	36.47
RC-242 (0.00-1.00)	Head	15.80	30.85	0.98	0.94	0.79	29.30	15.48	30.85	0.97	0.89	0.76	30.84
RC-242 (1.00-2.00)	Head	15.27	38.51	1.29	1.04	1.16	25.99	16.11	36.77	1.24	0.99	1.13	27.22
RC-242 (2.00-2.80)	Head	19.92	24.95	0.96	0.72	0.81	29.10	20.06	25.03	1.00	0.76	0.84	29.09
RC-307 (0.00-1.00)	+20	1.76	8.35	0.96	0.42	0.22	45.59	1.63	8.06	1.01	0.44	0.23	45.67
RC-307 (1.00-2.20)	-200 +270	0.82	91.44	0.53	0.34	0.45	2.21	0.85	91.27	0.54	0.35	0.46	2.28
RC-307 (2.20-3.00)	Head	13.01	40.70	1.32	1.04	1.07	21.62	13.65	39.50	1.31	1.03	1.06	22.29
RC-307 (3.00-3.81)	Head	14.14	33.45	1.98	1.12	1.16	26.12	14.56	32.90	1.96	1.11	1.14	26.80
RC-314 (0.00-1.10)	-100 +149	15.93	47.58	0.50	0.33	0.55	25.89	15.97	47.73	0.50	0.33	0.58	25.70
RC-314 (1.10-2.00)	Head	21.04	23.31	1.26	1.09	1.17	33.54	20.67	22.87	1.25	1.08	1.17	33.50
RC-314 (2.00-3.00)	Head	23.99	15.83	0.90	0.62	0.70	37.47	23.50	16.83	0.93	0.65	0.72	36.38
RC-314 (3.00-4.00)	-65 +100	27.60	8.00	0.71	0.29	0.47	41.06	27.00	7.93	0.71	0.29	0.48	41.14
RC-314 (4.00-5.20)	-100 +150	16.97	41.33	0.47	0.28	0.53	27.42	17.15	41.19	0.48	0.28	0.52	27.54

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-297 (0.00-1.00)	Head	9.17	43.66	0.97	1.24	0.96	25.89	8.41	43.93	1.05	1.33	1.14	25.58
RC-297 (1.00-1.94)	-28 +35 R	29.45	1.56	0.83	0.40	0.37	45.61	29.53	1.31	0.83	0.40	0.37	45.48
RC-297 (1.94-3.00)	-65 +100	27.51	8.45	0.80	0.57	0.62	41.85	26.63	8.56	0.79	0.55	0.57	41.35
RC-297 (3.00-4.00)	-100 +150	19.92	29.51	0.60	0.48	0.58	31.80	19.51	29.88	0.58	0.48	0.60	31.29
RC-297 (4.00-4.88)	Head	22.91	20.38	0.94	0.64	0.83	35.91	22.61	19.87	0.95	0.64	0.78	36.29
RC-333 (0.00-1.00)	Head	2.25	64.49	0.99	1.43	1.37	14.19	2.21	66.30	0.98	1.41	1.36	13.14
RC-333 (1.00-2.00)	Head	1.64	50.52	1.58	2.33	1.78	17.17	1.68	50.31	1.59	2.34	1.81	17.27
RC-333 (2.00-2.50)	Head	1.91	49.14	1.65	2.46	2.16	17.52	1.99	49.28	1.61	2.42	2.06	17.53
RC-333 (2.65-3.00)	-65 +100	11.07	12.42	0.61	1.56	0.52	41.41	11.48	12.41	0.63	1.57	0.54	41.74
RC-333 (3.00-4.00)	Head	4.99	45.10	1.62	2.17	2.03	20.21	4.91	45.39	1.61	2.14	1.93	20.17
RC-333 (4.00-4.32)	Head	8.21	43.19	1.65	2.08	2.06	21.46	8.52	42.25	1.66	2.08	2.05	22.02
RC-332 (0.00-1.00)	Head	4.94	50.42	1.06	1.55	1.33	22.15	5.15	50.99	1.05	1.54	1.29	21.95
RC-332 (1.00-2.00)	Head	4.73	46.54	1.59	2.17	2.13	20.82	5.09	45.91	1.56	2.12	2.04	21.15
RC-332 (2.00-3.00)	Head	7.36	41.44	1.78	2.15	2.09	21.78	6.80	42.02	1.84	2.34	2.31	21.62
RC-332 (3.00-4.00)	-48 +65	28.90	1.05	0.85	0.45	0.45	45.47	28.57	1.22	0.84	0.44	0.46	44.54
RC-332 (4.00-4.41)	Head	14.44	29.34	1.54	1.55	1.58	26.10	13.74	30.85	1.65	1.72	1.77	24.97
RC-331 (0.00-1.00)	Head	3.94	55.23	1.13	1.56	1.45	18.45	4.58	56.25	1.04	1.43	1.27	18.48
RC-331 (1.00-2.00)	Head	9.34	42.56	1.41	1.83	1.55	23.32	9.03	42.71	1.39	1.83	1.51	23.02
RC-331 (2.00-2.41)	Head	12.42	34.29	1.61	1.80	1.83	25.27	12.43	34.38	1.60	1.81	1.80	25.36
RC-331 (2.50-3.50)	Head	19.33	24.49	1.64	1.52	1.55	31.46	19.60	24.14	1.62	1.52	1.54	31.38
RC-331 (3.50-4.59)	Head	20.03	20.96	1.28	1.11	1.15	32.08	20.25	21.02	1.29	1.15	1.15	32.21
RC-330 (0.00-1.00)	Head	7.16	48.14	0.94	1.20	0.92	23.50	6.73	49.41	0.91	1.15	0.91	23.12
RC-330 (1.00-2.00)	Head	13.76	33.45	1.77	1.79	1.90	26.13	13.82	33.38	1.79	1.80	1.89	26.56
RC-330 (2.00-3.00)	Head	16.00	28.16	1.57	1.56	1.75	27.61	16.10	29.33	1.62	1.64	1.77	27.46
RC-330 (3.00-4.00)	Head	20.46	20.53	1.20	1.05	1.04	33.23	20.52	20.88	1.24	1.09	1.08	33.18
RC-330 (4.00-4.30)	Head	22.18	17.69	1.07	0.82	0.82	35.69	22.63	17.43	1.10	0.85	0.87	35.94
RC-329 (0.00-1.00)	Head	7.76	42.41	1.04	1.18	0.90	26.44	7.89	41.29	1.03	1.14	0.87	27.07
RC-329 (1.00-1.65)	Head	10.53	38.05	1.84	1.90	1.90	23.00	10.99	36.63	1.79	1.84	1.89	23.48
RC-329 (1.65-2.00)	Head	17.02	25.92	1.38	1.28	1.20	29.62	16.94	26.38	1.40	1.29	1.22	29.27
RC-329 (2.00-3.00)	Head	19.85	23.97	1.48	1.32	1.39	32.14	19.68	23.49	1.41	1.26	1.30	31.62
RC-329 (3.00-3.65)	Head	20.36	20.94	1.16	1.09	1.13	32.28	20.20	21.78	1.19	1.12	1.19	32.44

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-329 (3.65-4.00)	Head	22.62	14.69	1.01	0.80	0.81	36.51	22.69	14.18	1.00	0.79	0.78	36.94
RC-329 (4.00-5.00)	Head	25.08	13.57	1.00	0.66	0.80	38.41	24.56	14.46	0.99	0.66	0.77	38.01
RC-329 (5.00-6.00)	Head	23.64	16.04	0.91	0.53	0.73	36.64	23.41	16.30	0.90	0.51	0.67	36.53
RC-334 (0.00-1.00)	Head	13.66	35.10	1.02	1.17	0.86	28.98	13.76	35.02	1.00	1.17	0.87	28.75
RC-334 (1.00-2.00)	Head	22.16	13.49	0.95	0.67	0.67	39.12	23.07	13.58	0.96	0.68	0.70	39.10
RC-334 (2.00-3.00)	Head	23.12	18.94	0.94	0.59	0.79	35.97	22.98	17.39	0.90	0.55	0.70	35.80
RC-334 (3.00-4.00)	Head	22.93	18.73	0.93	0.51	0.68	35.50	23.22	17.03	0.94	0.51	0.69	36.02
RC-334 (4.00-4.70)	Head	10.14	60.77	0.52	0.41	0.44	16.79	10.29	60.39	0.54	0.42	0.46	16.94
RC-335 (0.00-1.00)	Head	17.42	20.72	0.94	0.86	0.64	35.51	17.33	21.23	0.94	0.87	0.63	35.54
RC-335 (1.00-2.00)	Head	22.97	14.79	0.91	0.55	0.69	37.16	22.32	15.35	0.89	0.55	0.68	36.23
RC-335 (2.00-3.00)	Head	19.16	29.60	0.90	0.54	0.63	30.01	19.72	28.69	0.94	0.56	0.66	30.76
RC-335 (3.00-4.00)	Head	4.56	80.90	0.34	0.38	0.38	6.99	4.30	81.76	0.33	0.38	0.37	6.65
RC-335 (4.00-5.00)	Head	0.48	89.47	0.64	0.72	0.55	1.98	0.45	89.50	0.64	0.72	0.55	2.00
RC-335 (5.00-5.75)	Head	0.42	89.76	0.68	0.76	0.60	1.11	0.44	89.97	0.66	0.75	0.58	1.12
RC-336 (0.00-1.00)	Head	12.33	40.25	1.04	1.19	1.08	27.22	12.96	39.45	1.04	1.18	1.06	27.45
RC-336 (1.00-2.00)	Head	7.23	52.94	0.70	0.67	0.56	20.77	6.94	52.26	0.81	0.79	0.65	20.94
RC-336 (2.00-3.00)	Head	1.43	85.57	0.87	0.69	0.59	3.24	1.47	85.75	0.85	0.67	0.56	3.27
RC-336 (3.00-4.00)	Head	0.84	89.54	0.52	0.79	0.69	1.22	0.78	89.97	0.50	0.77	0.66	1.12
RC-336 (4.00-4.51)	Head	4.12	82.22	0.34	0.43	0.42	6.23	3.87	83.37	0.30	0.37	0.36	5.92
RC-323 (0.00-1.17)	Head	21.88	18.35	1.10	0.76	0.77	35.57	22.26	17.50	1.09	0.75	0.77	36.02
RC-323 (1.17-2.19)	Head	24.56	11.83	0.94	0.60	0.73	37.99	24.90	11.52	0.94	0.60	0.71	38.41
RC-323 (2.19-2.52)	Head	26.18	7.51	0.89	0.52	0.67	40.23	25.61	7.80	0.87	0.51	0.66	39.33
RC-350 (0.00-1.00)	Head	3.80	67.24	1.10	1.72	1.81	11.28	4.11	67.04	1.06	1.66	1.72	11.56
RC-350 (1.00-2.00)	Head	16.77	27.76	1.12	0.99	0.88	31.44	17.41	27.70	1.14	0.99	0.91	32.49
RC-350 (2.00-3.00)	Head	23.78	11.91	1.03	0.77	0.77	36.99	24.76	11.61	1.02	0.73	0.79	38.44
RC-350 (3.00-4.00)	Head	25.55	11.15	1.04	0.73	0.80	39.10	25.14	11.55	1.03	0.72	0.77	38.45
RC-350 (4.00-5.00)	Head	25.94	7.48	0.94	0.58	0.75	38.94	26.21	7.46	0.96	0.59	0.75	39.32
RC-350 (5.00-5.35)	Head	26.90	7.30	1.00	0.63	0.82	40.23	26.79	7.32	1.01	0.65	0.84	39.93
RC-351 (0.00-1.00)	Head	3.61	64.99	1.16	1.81	1.90	11.95	3.83	65.40	1.14	1.76	1.81	12.08
RC-351 (1.00-2.00)	Head	7.39	49.89	1.17	1.28	1.01	23.29	7.30	49.57	1.16	1.23	1.01	21.68
RC-351 (2.00-3.00)	Head	19.38	20.61	1.73	1.28	1.29	32.34	18.98	21.03	1.71	1.27	1.28	30.17

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-351 (3.00-4.00)	Head	24.97	10.91	1.25	0.89	0.90	38.19	24.90	11.19	1.28	0.90	0.91	37.94
RC-351 (4.00-5.00)	Head	27.33	8.13	1.10	0.75	0.80	41.65	26.79	8.29	1.08	0.73	0.78	40.16
RC-351 (5.00-5.55)	Head	23.86	12.47	0.98	0.71	0.81	37.24	22.93	13.95	1.02	0.75	0.83	35.96
RC-352 (0.00-1.00)	Head	2.96	60.93	1.30	1.88	2.09	13.21	2.97	61.44	1.28	1.84	2.00	13.28
RC-352 (1.00-2.00)	Head	6.77	46.74	1.36	1.43	1.22	22.38	6.52	46.92	1.30	1.37	1.16	21.72
RC-352 (2.00-3.00)	Head	12.78	30.58	2.90	1.62	1.55	27.24	12.52	31.06	2.96	1.64	1.52	26.95
RC-352 (3.00-4.00)	Head	21.12	18.26	2.20	1.27	1.31	34.19	21.08	17.77	2.13	1.26	1.30	34.25
RC-352 (4.00-5.00)	Head	24.66	11.78	1.45	0.89	0.92	37.88	24.19	11.97	1.44	0.89	0.92	38.01
RC-352 (5.00-5.59)	Head	26.37	9.84	1.20	0.73	0.80	39.98	26.86	9.38	1.20	0.72	0.78	40.56
RC-362 (0.00-.037)	Head	4.40	57.00	1.45	1.88	2.15	14.51	4.32	57.23	1.46	1.92	2.20	14.53
RC-362 (0.37-1.00)	Head	5.25	58.55	1.26	1.70	1.71	15.95	5.53	57.95	1.23	1.69	1.64	16.36
RC-362 (1.00-1.88)	Head	11.83	36.31	0.98	1.02	0.75	29.01	11.85	35.62	0.96	1.00	0.73	29.69
RC-362 (1.88-2.35)	Head	23.59	16.37	1.16	0.88	0.86	37.49	23.22	17.39	1.15	0.87	0.85	37.24
RC-362 (2.35-3.35)	Head	22.85	17.03	1.09	0.78	0.87	36.55	22.60	16.12	1.09	0.73	0.86	34.95
RC-362 (3.35-4.27)	Head	24.84	10.03	1.13	0.63	0.96	35.95	25.17	9.34	1.07	0.61	0.86	37.48
RC-362 (4.27-5.16)	Head	26.09	8.13	1.12	0.67	0.86	39.35	26.84	7.81	1.13	0.60	0.86	39.92
RC-363 (0.00-0.80)	Head	4.76	59.36	1.08	1.63	1.58	14.90	4.70	59.10	1.07	1.65	1.55	15.31
RC-363 (0.80-1.54)	Head	6.32	43.02	0.84	1.09	0.80	24.82	5.85	45.07	0.93	1.21	0.96	22.92
RC-363 (1.54-1.94)	Head	12.90	33.61	1.84	1.38	1.31	24.96	13.19	32.15	1.72	1.33	1.24	25.95
RC-363 (1.94-2.73)	Head	15.77	26.98	1.80	1.39	1.31	28.09	16.74	27.33	1.80	1.32	1.31	29.28
RC-363 (2.73-3.28)	Head	19.06	22.62	1.81	1.29	1.36	31.16	19.16	21.51	1.72	1.26	1.27	31.78
RC-363 (3.28-3.85)	Head	21.35	18.46	1.68	1.11	1.10	34.73	21.46	18.28	1.74	1.12	1.13	35.36
RC-363 (3.85-4.64)	Head	25.15	10.88	1.30	0.84	0.85	40.67	25.18	10.81	1.30	0.84	0.85	40.79
RC-363 (4.64-5.56)	Head	24.79	13.08	1.10	0.72	0.80	37.57	25.02	12.43	1.08	0.70	0.77	37.86
RC-294 (0.00-1.00)	Head	1.25	62.96	1.70	2.28	2.39	10.75	1.23	62.79	1.71	2.28	2.40	10.58
RC-294 (1.00-2.00)	Head	4.84	65.05	1.19	1.75	1.86	12.45	4.86	65.17	1.22	1.77	1.88	12.40
RC-294 (2.00-3.00)	Head	21.83	18.48	1.13	0.83	0.80	36.83	22.42	17.62	1.14	0.82	0.81	37.41
RC-294 (3.00-4.00)	Head	25.38	12.56	1.06	0.77	0.84	39.44	25.00	11.61	0.98	0.78	0.76	40.92
RC-294 (4.00-4.80)	Head	27.73	5.83	0.73	0.48	0.46	43.99	27.86	4.81	0.73	0.48	0.46	43.86
RC-282 (0.00-1.00)	Head	0.81	83.98	0.53	0.82	0.77	5.75	0.82	83.87	0.53	0.82	0.76	5.85
RC-282 (1.00-2.00)	Head	1.85	84.77	0.49	0.82	0.69	5.99	1.89	84.80	0.50	0.82	0.70	6.10

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-282 (2.00-3.00)	Head	7.72	49.52	0.82	0.75	0.58	23.15	7.57	48.97	0.84	0.76	0.58	23.31
RC-282 (3.00-4.00)	Head	3.91	81.65	0.38	0.42	0.48	6.48	4.01	81.38	0.39	0.42	0.47	6.57
RC-284 (0.00-1.00)	Head	5.73	58.47	1.06	1.24	1.15	16.43	5.42	58.87	1.09	1.26	1.20	16.42
RC-280 (0.00-1.00)	Head	11.67	45.77	0.85	0.98	0.73	24.25	11.50	45.23	0.86	0.98	0.72	25.09
RC-280 (1.00-2.12)	Head	20.80	17.60	1.06	0.82	0.68	36.28	19.93	17.77	1.09	0.82	0.66	36.48
RC-281 (0.00-1.00)	Head	3.54	74.14	0.65	0.83	0.87	9.68	3.46	73.69	0.68	0.87	0.95	9.72
RC-281 (1.00-2.00)	Head	7.80	67.52	0.57	0.71	0.57	13.83	7.47	67.72	0.57	0.71	0.58	13.33
RC-281 (2.00-3.00)	Head	11.73	47.81	0.92	0.85	0.69	23.43	12.00	49.54	0.93	0.85	0.67	23.59
RC-281 (3.00-3.80)	Head	2.01	87.30	0.65	0.90	0.78	2.43	1.92	87.05	0.68	0.91	0.81	2.36
RC-285 (0.00-1.00)	Head	5.31	58.38	1.16	1.31	1.20	16.34	5.82	57.03	1.11	1.27	1.10	17.65
RC-285 (1.00-2.00)	Head	7.13	49.86	2.19	2.12	1.98	16.01	7.16	50.78	2.22	2.07	1.94	15.78
RC-285 (2.00-2.88)	Head	5.39	50.78	2.80	2.64	2.35	13.30	5.24	51.15	2.94	2.68	2.43	13.35
RC-339 (0.00-1.00)	Head	7.68	40.16	1.14	1.37	0.80	26.75	7.99	40.29	1.12	1.36	0.77	27.04
RC-339 (1.00-2.14)	Head	4.20	32.35	1.68	2.30	1.57	28.01	4.12	33.35	1.72	2.36	1.63	27.97
RC-338 (0.00-1.00)	Head	5.01	65.40	0.88	1.14	1.10	13.76	5.04	65.30	0.87	1.14	1.11	13.72
RC-338 (1.00-2.00)	Head	7.56	46.98	1.75	1.99	1.75	19.33	7.41	47.09	1.81	2.02	1.77	19.34
RC-338 (2.00-3.00)	Head	9.38	40.20	1.92	2.09	2.01	21.89	9.61	39.94	1.94	2.05	1.97	22.46
RC-338 (3.00-3.95)	Head	9.57	38.14	2.47	2.18	2.05	20.25	9.87	37.45	2.50	2.15	2.08	20.28
RC-337 (0.00-1.00)	Head	4.38	65.75	0.96	1.26	1.28	12.88	4.40	65.52	0.94	1.24	1.25	12.87
RC-337 (1.00-2.00)	Head	6.68	56.00	0.98	1.24	1.01	18.49	6.90	55.63	1.00	1.23	1.01	18.96
RC-337 (2.00-3.20)	Head	12.91	36.83	2.31	1.94	1.90	22.32	13.38	35.97	2.27	1.90	1.85	23.21
RC-337 (3.20-4.12)	Head	20.85	21.34	1.45	1.07	1.05	32.45	20.67	21.03	1.48	1.09	1.05	33.27
RC-343 (0.00-1.00)	Head	1.98	80.27	0.67	0.92	0.90	6.40	1.91	79.87	0.68	0.92	0.91	6.39
RC-308 (0.00-1.00)	Head	10.89	53.29	0.69	0.73	0.58	20.20	11.49	52.33	0.71	0.76	0.58	20.76
Lab Phase 3													
RC-308 (1.00-1.60)	Head	6.23	59.96	0.45	0.36	0.30	17.32	6.53	58.57	0.50	0.42	0.35	18.71
RC-312 (0.00-0.76)	Head	10.77	37.42	1.83	0.42	0.42	27.82	10.04	39.15	1.95	0.45	0.44	26.71
RC-322 (0.00-1.00)	-65 +100	8.20	69.63	0.37	0.54	0.51	11.98	8.33	69.07	0.38	0.54	0.53	12.09
RC-322 (1.00-2.00)	-35 +48	28.67	3.86	0.86	0.53	0.55	43.36	28.77	4.04	0.82	0.53	0.51	43.42
RC-322 (2.00-3.00)	-65 +100	29.09	4.51	0.79	0.38	0.48	42.25	29.10	4.41	0.79	0.39	0.45	42.87
RC-322 (3.00-4.07)	-48 +65	27.81	9.40	0.68	0.23	0.51	40.69	27.86	9.20	0.68	0.23	0.50	41.06

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-364 (0.78-1.78)	-65 +100	15.59	42.20	0.78	0.95	0.70	24.06	15.12	43.38	0.77	0.92	0.62	23.52
RC-364 (1.78-2.78)	-48 +65	28.28	4.90	0.89	0.53	0.62	42.80	28.46	4.85	0.91	0.53	0.65	42.12
RC-364 (2.78-3.78)	-35 +48	30.71	0.76	0.86	0.37	0.41	45.55	30.87	0.70	0.85	0.37	0.41	44.71
RC-364 (3.78-4.14)	-35 +48	31.34	0.76	0.85	0.36	0.38	45.38	31.21	0.78	0.83	0.36	0.39	44.87
RC-364 (4.14-4.88)	-48 +65	30.30	1.73	0.82	0.43	0.45	45.20	30.57	1.75	0.83	0.43	0.43	45.02
RC-364 (4.88-5.86)	-48 +65	30.47	2.22	0.82	0.42	0.42	45.06	30.64	1.85	0.82	0.43	0.43	44.94
RC-208 (0.00-1.00)	-65 +150	1.61	93.10	0.10	0.17	0.21	1.75	1.60	93.37	0.10	0.17	0.20	1.72
RC-209 (0.00-1.00)	-48 +65	18.31	33.84	0.61	0.62	0.44	29.43	18.57	33.20	0.62	0.64	0.50	30.36
RC-209 (1.00-2.00)	-20 +36	15.87	7.17	1.01	0.41	0.28	43.65	15.30	7.47	1.07	0.42	0.29	42.84
RC-321 (0.00-1.00)	-65 +150	6.35	75.41	0.31	0.48	0.38	9.70	6.46	75.25	0.32	0.48	0.36	9.74
RC-321 (1.00-2.00)	-48 +65	25.30	13.76	0.80	0.57	0.67	37.57	24.78	15.03	0.78	0.56	0.69	36.96
RC-321 (2.00-3.00)	-35 +48	29.38	1.77	0.82	0.44	0.56	43.23	29.45	1.70	0.81	0.47	0.56	43.70
RC-321 (3.00-4.00)	-65 +150	23.74	18.40	0.79	0.60	0.93	35.22	23.65	18.54	0.81	0.59	0.93	35.63
RC-321 (4.00-4.66)	-65 +150	24.58	17.01	0.74	0.45	0.68	36.42	24.15	17.79	0.76	0.45	0.73	35.71
RC-383 (0.00-1.20)	-65 +150	17.15	40.68	0.70	0.54	0.72	25.18	17.46	39.43	0.69	0.55	0.67	25.98
RC-383 (1.20-2.40)	-48 +65	28.65	4.21	0.89	0.57	0.81	41.52	28.59	4.25	0.87	0.56	0.78	41.34
RC-384 (0.00-1.00)	+20	4.07	9.70	0.81	0.31	0.21	44.32	4.28	9.35	0.73	0.30	0.21	44.05
RC-384 (1.00-2.00)	-150 +200	4.63	78.52	0.57	0.52	0.79	7.29	4.59	78.42	0.55	0.51	0.75	7.19
RC-384 (2.00-2.58)	-65 +150	19.00	35.04	0.64	0.48	0.75	26.90	19.04	34.03	0.65	0.47	0.74	27.53
RC-379 (0.00-1.20)	-48 +65	26.30	13.47	0.78	0.40	0.72	39.02	26.20	12.90	0.77	0.40	0.71	39.05
RC-379 (1.20-2.40)	-48 +65	27.79	9.44	0.78	0.38	0.61	41.16	27.65	9.35	0.77	0.38	0.59	40.65
RC-379 (2.40-3.60)	-65 +150	25.36	16.21	0.73	0.41	0.69	36.55	25.34	16.18	0.73	0.42	0.72	36.58
RC-379 (3.60-4.80)	-48 +65	30.71	2.43	0.83	0.34	0.41	43.72	30.79	2.03	0.83	0.34	0.42	43.51
RC-379 (4.80-6.00)	-35 +48	30.71	1.74	0.80	0.26	0.36	45.23	30.68	1.84	0.80	0.27	0.37	45.62
RC-380 (0.00-1.20)	-48 +65	27.34	8.60	0.79	0.41	0.57	41.53	27.73	7.66	0.80	0.41	0.62	41.40
RC-380 (1.20-2.40)	-35 +48	29.09	4.73	0.82	0.37	0.54	44.01	29.48	4.45	0.82	0.36	0.56	43.47
RC-380 (2.40-3.50)	-65 +150	25.32	17.76	0.68	0.34	0.66	37.32	25.00	18.42	0.68	0.35	0.65	37.18
RC-380 (3.50-4.53)	-65 +150	27.34	11.49	0.72	0.34	0.64	40.28	27.13	12.13	0.73	0.34	0.64	40.45
RC-381 (0.00-1.20)	-48 +65	25.62	15.25	0.67	0.32	0.57	35.81	25.58	15.19	0.68	0.33	0.58	36.37
RC-381 (1.20-2.40)	-35 +48	30.78	2.08	0.75	0.24	0.30	44.01	31.00	1.82	0.73	0.24	0.27	43.92
RC-381 (2.40-3.60)	-48 +65	29.15	6.06	0.77	0.35	0.56	41.93	29.26	5.86	0.77	0.35	0.53	41.82

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-381 (3.60-4.30)	-48 +65	22.73	25.36	0.56	0.30	0.54	32.36	22.11	27.64	0.55	0.28	0.54	31.32
RC-423 (0.00-1.20)	-65 +150	4.79	81.27	0.25	0.42	0.50	6.74	4.94	81.01	0.26	0.42	0.49	6.92
RC-423 (1.20-2.20)	-48 +65	26.77	10.91	0.78	0.75	0.63	38.52	26.67	11.14	0.77	0.75	0.60	38.76
RC-418 (0.00-1.20)	-65 +150	8.59	68.45	0.34	0.51	0.51	12.13	9.36	66.32	0.36	0.53	0.52	13.04
RC-418 (1.20-2.40)	-65 +150	26.38	10.93	0.75	0.48	0.52	40.87	26.42	11.09	0.74	0.46	0.58	39.30
RC-418 (2.40-3.21)	-65 +150	28.23	6.24	0.74	0.37	0.47	42.04	28.21	6.43	0.76	0.37	0.52	42.14
RC-419 (0.00-1.10)	-48 +65	14.96	46.14	0.54	0.60	0.63	22.67	15.76	43.44	0.57	0.61	0.60	24.62
RC-419 (1.27-2.40)	-35 +48	30.26	0.55	0.82	0.26	0.30	46.54	30.34	0.64	0.80	0.25	0.29	45.95
RC-419 (2.40-3.60)	-35 +48	31.00	0.30	0.76	0.19	0.26	44.98	31.11	0.27	0.77	0.19	0.26	45.14
RC-419 (3.60-4.57)	-48 +65	30.47	1.00	0.80	0.25	0.32	47.79	30.89	1.02	0.75	0.24	0.32	44.86
RC-420 (0.00-1.20)	-65 +150	5.99	76.62	0.28	0.40	0.43	8.79	5.88	76.87	0.28	0.39	0.44	8.58
RC-420 (1.20-2.40)	-35 +48	29.62	2.03	0.78	0.36	0.45	43.38	29.70	1.94	0.77	0.36	0.46	43.00
RC-420 (2.40-3.40)	-35 +48	29.61	2.93	0.77	0.31	0.47	42.89	29.57	3.18	0.77	0.31	0.47	43.41
RC-420 (3.40-3.97)	-20 +36	30.91	0.17	0.80	0.22	0.25	46.36	30.78	0.34	0.81	0.23	0.26	46.02
RC-421 (0.00-1.00)	+20	3.33	9.70	0.87	0.55	0.33	44.19	3.18	9.62	0.88	0.55	0.34	44.53
RC-421 (1.00-1.85)	-48 +65	26.40	8.99	0.80	0.52	0.80	39.02	26.57	8.66	0.81	0.53	0.81	39.28
RC-422 (0.00-1.00)	-65 +150	3.69	81.87	0.27	0.46	0.42	6.38	4.09	81.41	0.27	0.46	0.41	6.51
RC-422 (1.00-1.61)	-65 +150	17.48	34.06	0.75	0.64	0.73	27.19	17.63	33.73	0.74	0.64	0.70	27.56
RC-426 (0.00-1.20)	-48 +65	13.34	50.20	0.60	0.87	0.53	21.19	12.96	51.17	0.57	0.85	0.49	20.80
RC-426 (1.20-2.40)	+20	4.44	8.64	0.92	0.86	0.29	45.24	4.31	8.88	0.98	0.86	0.30	40.63
RC-426 (2.40-3.58)	-65 +150	17.14	38.28	0.87	0.69	0.82	25.71	16.78	38.75	0.88	0.69	0.81	25.87
RC-427 (0.00-1.00)	-65 +150	4.59	81.31	0.26	0.48	0.42	6.90	4.30	81.73	0.25	0.47	0.40	6.76
RC-427 (1.00-1.93)	-65 +150	10.82	58.34	0.56	0.61	0.75	15.68	10.74	59.06	0.56	0.60	0.75	15.52
RC-425 (1.00-2.00)	-65 +150	5.33	78.97	0.33	0.39	0.51	6.06	5.45	78.50	0.33	0.39	0.49	6.50
RC-425 (2.00-3.00)	-48 +65	28.15	3.35	0.81	0.47	0.58	41.61	28.24	3.70	0.80	0.47	0.58	41.38
RC-425 (3.00-3.90)	-48 +65	24.33	15.53	0.75	0.55	0.80	36.90	24.66	14.74	0.76	0.55	0.79	37.82
RC-424 (1.20-2.40)	-150 +200	1.83	91.24	0.32	0.38	0.46	2.18	1.82	91.25	0.34	0.39	0.49	2.21
RC-424 (2.40-3.60)	-35 +48	28.20	3.70	0.80	0.45	0.65	42.45	28.21	3.54	0.81	0.45	0.65	42.88
RC-428 (0.00-1.20)	-150 +200	1.62	93.32	0.20	0.37	0.49	1.49	1.47	93.47	0.20	0.37	0.50	1.48
RC-428 (1.20-2.20)	-48 +65	27.17	9.27	0.77	0.36	0.57	40.92	26.83	10.16	0.75	0.36	0.58	40.60
RC-429 (0.00-1.20)	-65 +150	6.70	74.26	0.35	0.43	0.49	10.16	6.88	73.60	0.34	0.43	0.48	10.40

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-429 (1.20-2.37)	-48 +65	21.74	27.79	0.55	0.30	0.56	32.25	21.54	28.04	0.55	0.30	0.52	32.78
RC-430 (1.20-2.40)	-65 +150	2.24	88.14	0.21	0.33	0.49	3.89	2.79	87.56	0.21	0.32	0.47	4.06
RC-400 (0.00-1.00)	+20	5.32	11.17	1.01	0.53	0.28	43.18	5.00	12.04	1.02	0.54	0.30	42.70
RC-401 (1.00-1.64)	-150 +200	6.33	73.40	0.46	0.56	0.64	9.92	6.66	73.15	0.46	0.55	0.61	10.13
RC-398 (1.20-2.40)	-150 +200	3.53	83.56	0.49	0.44	0.59	5.53	3.52	83.80	0.50	0.44	0.62	5.42
RC-398 (2.40-3.60)	-48 +65	28.86	2.85	0.83	0.56	0.55	44.57	28.68	3.45	0.83	0.55	0.56	44.34
RC-398 (3.60-4.60)	-35 +48	30.25	1.51	0.82	0.44	0.46	44.98	30.14	1.49	0.83	0.44	0.46	45.31
RC-397 (0.00-1.00)	-65 +150	4.68	82.09	0.25	0.44	0.36	6.78	4.70	82.07	0.25	0.45	0.39	6.71
RC-397 (1.00-2.00)	-35 +48	29.28	2.61	0.81	0.45	0.46	43.92	29.68	2.32	0.82	0.45	0.46	44.63
RC-397 (2.00-2.84)	-35 +48	30.54	0.83	0.83	0.35	0.36	46.10	30.33	0.85	0.83	0.35	0.36	45.70
RC-394 (1.20-2.40)	-48 +65	18.57	33.96	0.67	0.73	0.68	28.99	18.94	32.79	0.69	0.75	0.76	29.58
RC-394 (2.40-3.60)	-65 +150	9.55	67.34	0.28	0.22	0.35	13.45	9.36	67.32	0.28	0.21	0.32	13.62
RC-396 (1.20-2.40)	-48 +65	27.17	8.29	0.82	0.85	0.61	41.33	27.06	8.46	0.83	0.86	0.63	41.78
RC-396 (2.40-3.60)	-48 +65 R	15.12	47.48	0.44	0.45	0.60	22.18	15.11	47.96	0.45	0.46	0.63	22.89
RC-395 (2.40-3.60)	-65 +150	4.46	82.83	0.27	0.42	0.60	6.09	4.33	83.28	0.26	0.41	0.55	5.98
Lab Phase 4													
RC-728 (0.00-1.00)	-35 +48	24.64	18.62	0.69	0.32	0.64	38.85	24.72	17.92	0.70	0.32	0.61	39.69
RC-728 (1.00-2.00)	-48 +65	27.52	11.23	0.78	0.34	0.55	44.38	27.86	11.54	0.78	0.34	0.55	44.02
RC-728 (2.00-3.00)	-65 +150	4.79	83.05	0.16	0.19	0.31	7.12	4.90	82.88	0.16	0.20	0.31	7.32
RC-729 (0.00-1.00)	-48 +65	21.82	26.64	0.75	0.44	0.75	35.48	22.45	24.53	0.77	0.45	0.80	36.31
RC-729 (1.00-2.00)	-48 +65	26.61	10.94	0.80	0.43	0.84	43.42	26.24	11.81	0.79	0.43	0.84	42.76
RC-729 (2.00-3.00)	-35 +48	30.15	1.16	0.82	0.33	0.48	49.51	30.52	1.20	0.83	0.33	0.48	49.78
RC-729 (3.00-4.00)	-48 +65	29.66	3.62	0.86	0.41	0.59	48.14	29.50	3.35	0.87	0.40	0.58	48.51
RC-730 (0.00-1.00)	+20	6.02	2.95	0.62	0.21	0.17	50.84	6.22	3.03	0.62	0.20	0.18	51.20
RC-730 (1.00-2.00)	-65 +150	2.25	91.25	0.12	0.16	0.22	3.34	2.03	91.72	0.13	0.17	0.21	3.19
RC-732 (0.00-1.00)	-48 +65	26.98	12.43	0.77	0.35	0.56	41.96	26.95	12.58	0.76	0.35	0.52	42.34
RC-732 (1.00-2.00)	-35 +48	28.82	6.74	0.74	0.25	0.45	43.50	28.61	6.73	0.74	0.25	0.45	43.46
RC-733 (0.00-1.00)	+20	4.09	7.63	0.58	0.23	0.20	48.21	4.07	7.68	0.58	0.24	0.20	48.17
RC-733 (1.00-2.00)	-48 +65	29.45	4.04	0.81	0.41	0.70	44.87	29.44	4.20	0.81	0.40	0.69	44.41
RC-733 (2.00-2.50)	-48 +65	28.77	5.81	0.79	0.39	0.68	44.46	28.99	5.61	0.80	0.39	0.67	44.76
RC-734 (0.00-1.00)	-48 +65	14.99	45.98	0.57	0.51	0.63	24.52	14.88	46.51	0.57	0.50	0.57	24.78

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-734 (1.00-2.00)	-65 +150	22.24	26.12	0.83	0.63	0.85	34.17	22.23	25.54	0.85	0.64	0.87	34.27
RC-734 (2.00-2.50)	-65 +150	21.59	26.70	0.77	0.58	0.86	33.35	21.50	26.52	0.78	0.57	0.80	33.76
RC-736 (0.00-1.00)	-65 +150	14.21	49.55	0.60	0.54	0.63	22.43	14.50	49.24	0.59	0.54	0.62	22.74
RC-737 (0.00-1.00)	-65 +150	15.73	43.95	0.60	0.54	0.65	24.59	16.23	43.66	0.63	0.55	0.69	25.28
RC-737 (1.00-2.00)	-65 +150	23.14	22.21	0.75	0.65	0.89	34.90	23.17	22.04	0.75	0.64	0.81	35.20
RC-737 (2.00-3.00)	-65 +150	24.57	18.85	0.77	0.60	0.84	37.30	23.89	19.33	0.77	0.60	0.82	37.03
RC-739 (0.00-1.00)	-65 +150	17.19	39.97	0.65	0.60	0.71	27.05	17.54	39.65	0.65	0.61	0.71	27.72
RC-739 (1.00-2.00)	-48 +65	24.92	16.18	0.79	0.66	0.87	37.81	25.00	16.13	0.80	0.66	0.83	38.33
RC-739 (2.00-3.00)	-65 +150	17.50	39.30	0.67	0.59	0.65	27.27	17.67	39.72	0.68	0.59	0.67	27.27
RC-740 (0.00-1.00)	-65 +150	6.29	76.50	0.27	0.39	0.29	10.21	6.46	76.27	0.27	0.39	0.29	10.43
RC-740 (1.00-2.00)	-65 +150	9.61	64.42	0.41	0.45	0.46	15.26	10.04	64.10	0.41	0.45	0.46	15.91
RC-740 (2.00-3.00)	-150 +200	4.18	82.05	0.52	0.39	0.56	6.77	4.28	81.82	0.49	0.38	0.56	6.79
RC-740 (3.00-4.00)	-48 +65	22.15	24.83	0.70	0.44	0.80	33.09	22.16	24.66	0.71	0.44	0.73	34.02
RC-740 (4.00-5.00)	-48 +65	28.92	5.67	0.75	0.38	0.66	42.62	28.32	6.27	0.75	0.38	0.65	42.46
RC-741 (0.00-1.00)	-35 +48	30.33	2.96	0.75	0.28	0.32	44.95	30.27	3.16	0.75	0.28	0.33	45.54
RC-741 (1.00-2.00)	-48 +65	28.43	10.01	0.70	0.32	0.57	41.52	28.32	9.43	0.69	0.31	0.54	41.48
RC-741 (2.00-3.00)	-65 +150	27.72	11.54	0.70	0.41	0.60	40.19	28.53	11.54	0.71	0.41	0.61	41.01
RC-741 (3.00-3.70)	-48 +65	13.89	53.44	0.34	0.23	0.38	20.11	13.70	53.90	0.33	0.23	0.40	19.60
RC-742 (0.00-1.00)	-65 +150	19.47	35.43	0.52	0.36	0.48	29.25	19.72	34.94	0.52	0.36	0.49	29.10
RC-742 (1.00-2.00)	-48 +65	29.45	4.17	0.72	0.31	0.37	44.29	30.07	4.05	0.71	0.31	0.38	44.18
RC-742 (2.00-3.00)	-35 +48	30.84	0.88	0.72	0.22	0.25	46.51	31.64	0.90	0.71	0.22	0.24	46.54
RC-742 (3.00-3.70)	-48 +65	29.74	4.90	0.73	0.29	0.48	42.82	30.22	4.76	0.73	0.29	0.45	43.01
RC-743 (0.00-1.00)	-48 +65	21.51	25.35	0.68	0.61	0.71	33.20	20.98	26.83	0.69	0.61	0.61	33.14
RC-743 (1.00-2.00)	-35 +48	29.29	5.05	0.77	0.37	0.54	42.55	29.28	5.02	0.78	0.38	0.55	42.44
RC-743 (2.00-3.00)	-35 +48	30.30	3.21	0.75	0.28	0.47	44.03	29.60	3.19	0.74	0.29	0.51	43.29
RC-743 (3.00-4.00)	-48 +65	29.21	5.73	0.72	0.31	0.45	43.24	29.87	5.60	0.76	0.31	0.44	44.26
RC-743 (4.00-5.00)	-35 +48	31.05	1.81	0.75	0.27	0.35	46.53	31.08	1.71	0.76	0.27	0.35	46.09
RC-743 (5.00-5.70)	-35 +48	30.67	2.97	0.73	0.29	0.39	46.04	30.47	2.98	0.72	0.29	0.44	45.22
RC-744 (0.00-1.00)	-65 +150	11.38	58.53	0.45	0.51	0.47	18.72	10.59	59.66	0.44	0.50	0.42	17.97
RC-745 (0.00-1.00)	-65 +150	12.95	54.03	0.53	0.46	0.57	20.03	12.53	55.34	0.52	0.46	0.55	19.58
RC-745 (1.00-2.00)	-150 +200	5.23	80.92	0.34	0.30	0.46	7.83	4.86	81.37	0.34	0.31	0.47	7.60

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-745 (2.00-3.00)	-48 +65	29.80	2.91	0.81	0.38	0.55	45.79	29.72	3.40	0.80	0.38	0.59	44.78
RC-745 (3.00-4.00)	-48 +65	28.95	5.83	0.78	0.38	0.70	42.17	28.54	6.00	0.78	0.39	0.64	42.65
RC-745 (4.00-4.60)	-65 +150	26.04	14.69	0.72	0.42	0.76	37.64	25.80	15.00	0.71	0.43	0.69	37.54
RC-746 (0.00-1.00)	-48 +65	26.23	13.40	0.71	0.38	0.60	38.46	26.27	13.75	0.68	0.38	0.55	38.11
RC-746 (1.00-2.00)	-65 +150	25.39	16.12	0.66	0.33	0.55	37.76	25.34	16.30	0.64	0.33	0.60	37.15
RC-746 (2.00-3.00)	-65 +150	28.34	8.35	0.68	0.33	0.52	40.58	28.34	8.64	0.69	0.34	0.51	40.41
RC-746 (3.00-4.00)	-65 +150	28.80	7.38	0.73	0.44	0.53	42.52	28.71	7.46	0.74	0.44	0.58	41.83
RC-746 (4.00-4.50)	-48 +65	27.47	11.25	0.68	0.33	0.61	40.48	27.27	12.18	0.69	0.33	0.53	41.57
RC-751 (0.00-1.00)	-65 +150	6.98	73.58	0.34	0.47	0.54	11.26	6.57	74.52	0.34	0.48	0.55	10.94
RC-751 (1.00-2.00)	-48 +65	28.71	4.11	0.78	0.35	0.47	44.93	28.67	4.05	0.78	0.35	0.51	44.19
RC-751 (2.00-3.00)	-35 +48	28.99	1.88	0.82	0.39	0.41	46.50	29.28	2.17	0.82	0.39	0.43	45.58
RC-751 (3.00-4.00)	-35 +48	28.94	4.03	0.83	0.43	0.64	43.54	29.38	4.05	0.84	0.43	0.65	44.71
RC-751 (4.00-5.00)	-35 +48	31.13	1.21	0.80	0.25	0.34	47.04	31.43	1.20	0.79	0.25	0.34	46.01
RC-753 (0.00-0.70)	-35 +48	27.55	7.13	0.87	0.95	0.59	42.77	28.03	7.01	0.88	0.95	0.61	42.48
RC-759 (1.00-2.00)	-48 +65	20.69	31.13	0.56	0.33	0.77	31.22	20.49	31.96	0.55	0.32	0.64	31.77
RC-764 (1.00-2.00)	-65 +150	19.49	33.93	0.66	0.59	0.73	29.45	19.11	34.81	0.65	0.58	0.74	29.10
RC-764 (2.00-3.00)	-35 +48	29.51	2.33	0.84	0.46	0.49	44.85	29.33	2.25	0.84	0.47	0.56	44.91
RC-764 (3.00-4.00)	-35 +48	30.07	1.51	0.81	0.26	0.43	45.89	30.10	1.53	0.81	0.26	0.34	46.60
RC-764 (4.00-5.00)	-65 +150	24.12	20.48	0.69	0.32	0.58	37.38	24.11	20.23	0.68	0.32	0.70	37.00
RC-770 (2.00-3.00)	-65 +150	24.58	14.42	0.84	0.68	0.92	38.56	24.61	14.06	0.84	0.67	0.76	39.70
RC-771 (1.00-2.00)	-48 +65	29.17	3.73	0.86	0.53	0.43	45.12	28.78	3.83	0.84	0.53	0.48	44.50
RC-771 (2.00-3.00)	-65 +150	9.12	68.36	0.26	0.21	0.35	13.46	8.81	69.50	0.26	0.22	0.39	12.96
RC-773 (0.00-1.00)	-48 +65	28.39	5.77	0.90	0.75	0.58	43.79	28.65	5.79	0.92	0.76	0.54	43.96
RC-773 (1.00-2.00)	-48 +65	25.68	16.17	0.77	0.44	0.74	38.56	26.17	16.19	0.76	0.42	0.66	39.28
Lab Phase 5													
RC-773 (2.00-3.00)	-48 +65	16.43	44.56	0.44	0.24	0.57	24.32	17.02	43.44	0.46	0.24	0.63	25.32
RC-774 (0.00-1.00)	-65 +150	5.92	75.48	0.38	0.69	0.60	9.79	5.93	75.67	0.37	0.66	0.57	9.79
RC-775 (0.00-1.00)	-65 +150	8.27	66.98	0.48	0.74	0.66	13.48	8.33	66.83	0.47	0.73	0.63	13.42
RC-775 (1.00-2.00)	-48 +65	26.37	11.25	0.83	0.59	0.71	40.62	27.41	11.72	0.81	0.57	0.71	41.16
RC-775 (2.00-3.00)	-48 +65	27.48	6.83	0.71	0.51	0.64	39.50	27.55	6.74	0.72	0.50	0.62	39.73
RC-775 (3.00-3.60)	-48 +65	28.25	5.09	0.73	0.47	0.49	41.50	28.59	4.89	0.73	0.47	0.53	41.07

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-776 (0.00-1.00)	-65 +150	12.66	52.37	0.58	0.85	0.72	20.77	12.89	51.59	0.57	0.84	0.65	21.36
RC-776 (1.00-2.00)	-65 +150	20.14	30.21	0.69	0.67	0.91	31.66	20.48	30.08	0.68	0.67	0.86	32.31
RC-776 (2.00-3.00)	-35 +48	30.92	1.70	0.83	0.37	0.37	47.41	30.28	1.79	0.82	0.37	0.36	47.21
RC-776 (3.00-3.80)	-35 +48	30.89	2.02	0.79	0.24	0.34	47.22	30.68	2.03	0.78	0.23	0.31	46.85
RC-780 (0.00-1.00)	-48 +65	20.21	30.00	0.76	0.80	0.95	31.27	20.46	29.99	0.72	0.46	0.80	31.56
RC-780 (1.00-2.00)	-48 +65	28.01	6.96	0.88	0.68	0.64	43.31	27.97	7.09	0.86	0.67	0.49	43.89
RC-781 (0.00-1.00)	-65 +150	9.23	64.75	0.49	0.75	0.65	15.66	9.42	63.96	0.49	0.77	0.71	15.56
RC-781 (1.00-2.00)	-48 +65	21.47	26.12	0.77	0.74	0.91	33.55	21.81	25.82	0.78	0.74	0.93	34.24
RC-781 (2.00-2.70)	-48 +65	17.21	40.22	0.55	0.48	0.80	27.26	17.14	40.58	0.55	0.47	0.69	27.44
RC-782 (0.00-1.00)	-48 +65	24.11	17.93	0.82	0.75	0.84	37.76	24.15	18.53	0.82	0.75	0.71	38.72
RC-782 (1.00-2.00)	-65 +150	19.65	31.75	0.65	0.59	0.76	31.34	19.65	32.25	0.64	0.58	0.65	30.92
RC-782 (2.00-3.00)	-48 +65	26.75	11.80	0.71	0.31	0.69	41.21	27.02	11.69	0.72	0.30	0.65	41.29
RC-783 (0.00-1.00)	-65 +150	7.83	69.45	0.46	0.71	0.67	13.05	7.84	69.48	0.44	0.68	0.61	13.23
RC-783 (1.00-2.00)	-65 +150	8.72	68.18	0.42	0.61	0.60	14.00	8.71	68.32	0.42	0.62	0.58	14.09
RC-785 (1.00-2.00)	-48 +65	26.12	14.99	0.81	0.75	0.73	40.13	26.25	14.96	0.82	0.77	0.72	40.60
RC-239 (1.00-2.00)	-65 +150	20.04	33.07	0.73	0.64	0.80	30.73	20.73	32.89	0.75	0.66	0.87	31.37
RC-239 (2.00-2.71)	-48 +65	24.36	16.89	0.80	0.57	0.93	37.14	25.18	16.47	0.80	0.58	0.90	38.27
RC-246 (2.00-2.28)	-48 +65	28.59	4.08	0.81	0.83	0.55	44.60	28.54	4.24	0.83	0.86	0.58	44.93
RC-283 (1.00-2.00)	-65 +150	22.50	21.17	0.76	0.65	0.79	35.63	22.15	22.10	0.77	0.67	0.91	35.41
RC-283 (2.00-3.04)	-65 +150	23.37	18.65	0.73	0.65	0.76	37.91	23.13	19.39	0.74	0.66	0.73	36.83
RC-286 (1.00-2.00)	-48 +65	25.93	10.12	0.81	0.65	0.79	40.49	26.04	9.79	0.81	0.64	0.78	40.49
RC-286 (2.00-3.00)	-35 +48	30.16	1.05	0.82	0.47	0.38	46.51	30.40	1.12	0.82	0.48	0.39	46.59
RC-286 (3.00-4.16)	-48 +65	26.72	10.74	0.76	0.59	0.76	41.56	26.66	10.63	0.77	0.59	0.69	42.06
RC-287 (1.00-2.00)	-65 +150	7.39	74.71	0.35	0.55	0.50	11.10	6.88	73.71	0.35	0.57	0.57	10.88
RC-287 (2.00-3.00)	-48 +65	28.28	6.08	0.74	0.34	0.52	43.38	28.34	6.29	0.75	0.33	0.52	43.46
RC-287 (3.00-4.19)	-48 +65	13.33	53.98	0.52	0.22	0.47	20.41	13.56	53.32	0.54	0.22	0.42	21.41
RC-310 (0.00-1.00)	-48 +65	22.87	22.01	0.76	0.65	0.69	35.75	22.70	22.70	0.76	0.65	0.65	35.29
RC-310 (1.00-2.00)	-48 +65	19.18	34.11	0.76	0.59	0.69	30.00	19.09	34.65	0.75	0.61	0.79	29.11
RC-310 (2.00-3.00)	-65 +150	20.69	29.18	0.76	0.64	0.86	31.86	20.64	29.77	0.76	0.65	0.92	31.77
RC-310 (3.00-4.00)	-65 +150	20.91	29.84	0.68	0.60	0.77	32.22	21.47	29.59	0.71	0.62	0.77	34.29
RC-324 (2.00-3.00)	-35 +48	27.81	6.66	0.86	0.89	0.68	43.69	27.79	6.66	0.85	0.90	0.71	44.14

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-324 (3.00-4.00)	-65 +150	16.41	44.16	0.57	0.82	0.83	25.99	16.51	43.67	0.58	0.83	0.83	25.79
RC-328 (3.00-4.13)	-48 +65	28.84	2.90	0.84	0.52	0.64	43.27	28.87	2.94	0.83	0.51	0.61	42.99
RC-366 (0.00-1.20)	-48 +65	26.46	13.74	0.70	0.39	0.70	38.67	26.39	14.01	0.70	0.39	0.64	38.25
RC-366 (1.20-2.40)	-35 +48	28.56	9.01	0.70	0.30	0.49	40.81	28.48	8.97	0.71	0.30	0.55	40.94
RC-366 (2.40-3.55)	-35 +48	30.47	4.29	0.72	0.27	0.46	43.38	30.43	4.60	0.74	0.28	0.43	44.23
RC-371 (2.00-3.00)	-65 +150	15.00	47.05	0.58	0.49	0.77	23.15	14.81	47.72	0.58	0.50	0.79	22.75
RC-371 (3.00-3.76)	-65 +150	16.63	42.39	0.61	0.50	0.81	25.53	17.21	42.43	0.61	0.49	0.74	26.62
RC-373 (1.20-2.40)	-65 +150	14.44	48.45	0.85	0.60	0.74	22.23	14.18	48.77	0.85	0.60	0.74	22.02
RC-373 (2.40-3.40)	-48 +65	27.70	8.24	0.82	0.63	0.75	41.74	27.86	8.10	0.82	0.63	0.80	41.68
RC-373 (3.40-4.33)	-48 +65	28.08	6.99	0.82	0.61	0.87	41.54	27.85	7.30	0.84	0.61	0.87	41.83
RC-378 (1.20-2.00)	-48 +65	27.15	9.57	0.80	0.54	0.70	41.78	27.75	9.43	0.81	0.55	0.71	41.98
RC-414 (1.20-2.40)	-48 +65	23.12	21.84	0.68	0.50	0.90	35.67	22.55	23.87	0.65	0.50	0.72	34.65
RC-414 (2.40-3.60)	-35 +48	30.31	1.46	0.79	0.33	0.52	45.85	30.58	1.51	0.77	0.34	0.51	45.97
RC-414 (3.60-4.44)	-35 +48	29.18	3.19	0.77	0.32	0.53	44.00	28.98	3.34	0.80	0.33	0.64	44.22
RC-432 (1.20-2.40)	-35 +48	29.11	1.88	0.85	0.57	0.39	44.93	29.18	1.93	0.84	0.57	0.39	44.93
RC-432 (2.40-3.60)	-48 +65	28.55	5.39	0.79	0.50	0.58	43.27	28.06	5.44	0.80	0.50	0.51	44.15
RC-432 (3.60-4.71)	-48 +65	28.41	6.03	0.76	0.32	0.44	45.26	29.06	5.99	0.75	0.31	0.44	43.54
RC-434 (1.00-2.00)	-48 +65	28.94	2.01	0.85	0.58	0.59	44.29	28.55	2.00	0.85	0.57	0.57	44.93
RC-434 (2.00-2.83)	-48 +65	28.07	5.06	0.80	0.60	0.68	43.55	28.08	5.05	0.79	0.60	0.63	43.63
RC-436 (1.20-2.40)	-35 +48	29.77	3.35	0.79	0.27	0.40	44.66	29.89	3.37	0.78	0.28	0.40	44.43
RC-436 (2.40-3.60)	-65 +150	8.55	69.07	0.57	0.21	0.38	13.24	8.37	69.27	0.69	0.21	0.38	13.03
RC-439 (1.20-2.40)	-35 +48	28.90	5.14	0.81	0.42	0.51	44.31	28.71	5.36	0.80	0.41	0.58	42.91
RC-440 (1.00-2.00)	-35 +48	29.60	1.55	0.82	0.51	0.44	44.87	30.10	1.73	0.80	0.50	0.45	44.04
RC-440 (2.00-3.02)	-35 +48	29.99	1.79	0.81	0.50	0.40	44.41	30.03	1.81	0.81	0.49	0.41	43.60
RC-447 (0.00-1.20)	-35 +48	28.56	4.51	0.89	0.66	0.49	42.87	28.68	4.47	0.88	0.65	0.48	43.39
RC-447 (1.20-2.40)	-48 +65	27.26	9.80	0.79	0.51	0.70	40.60	27.78	9.79	0.79	0.50	0.57	41.73
RC-447 (2.40-3.60)	-35 +48	27.71	9.58	0.74	0.32	0.50	41.52	28.19	9.37	0.75	0.33	0.55	41.86
RC-448 (0.00-1.20)	-48 +65	20.39	23.25	0.88	1.15	0.63	34.79	20.43	23.37	0.91	1.19	0.64	34.90
RC-448 (1.20-2.40)	-150 +200	13.41	47.41	0.69	0.74	0.70	21.99	13.81	46.74	0.70	0.75	0.72	22.44
RC-448 (2.40-3.60)	-65 +150	22.57	19.87	0.85	0.76	0.81	35.68	22.70	19.16	0.87	0.78	0.92	36.18
RC-448 (3.60-4.33)	-35 +48	29.50	1.04	0.86	0.57	0.46	46.66	30.02	1.11	0.86	0.58	0.46	46.35

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-451 (0.00-1.20)	-35 +48	29.10	4.38	0.83	0.64	0.42	42.93	29.31	4.12	0.83	0.65	0.43	43.30
RC-451 (1.20-2.40)	-35 +48	29.80	5.50	0.76	0.28	0.41	45.21	29.26	5.40	0.76	0.29	0.43	44.60
RC-452 (0.00-1.20)	-35 +48	29.76	1.46	0.93	0.79	0.31	47.05	29.52	1.55	0.93	0.78	0.32	47.31
RC-453 (0.00-1.20)	-48 +65	24.71	18.82	0.77	0.93	0.65	37.13	23.91	19.05	0.78	0.93	0.68	36.60
Lab Phase 6													
RC-516 (1.20-2.40)	-65 +150	11.09	56.48	1.14	0.59	0.67	18.85	10.87	56.48	1.07	0.59	0.70	18.13
RC-516 (2.40-3.40)	-48 +65	26.77	9.35	0.79	0.61	0.78	41.16	26.76	9.88	0.80	0.62	0.75	41.30
RC-516 (3.40-4.27)	-48 +65	25.07	15.42	0.73	0.60	0.93	38.11	24.64	16.17	0.70	0.58	0.81	37.03
RC-517 (0.00-1.20)	-48 +65	28.42	7.56	0.76	0.61	0.57	42.64	28.37	7.55	0.75	0.60	0.57	42.52
RC-517 (1.20-2.40)	-48 +65	22.26	24.15	0.60	0.30	0.73	34.75	22.31	24.39	0.60	0.31	0.60	35.06
RC-535 (0.00-1.20)	-65 +150	7.22	73.59	0.30	0.34	0.43	11.68	7.20	73.70	0.32	0.35	0.42	11.69
RC-535 (1.20-2.40)	-48 +65	22.83	21.80	0.66	0.42	0.86	35.25	21.90	22.11	0.63	0.42	0.76	34.38
RC-535 (2.40-3.40)	-48 +65	24.18	18.54	0.68	0.41	0.77	36.55	24.24	18.02	0.67	0.40	0.62	37.38
RC-535 (3.40-4.14)	-48 +65	24.32	17.22	0.67	0.39	0.77	37.42	24.36	17.51	0.69	0.39	0.62	37.99
RC-538 (1.20-2.40)	-65 +150	17.39	37.88	0.66	0.48	0.80	27.82	17.86	37.87	0.68	0.47	0.68	29.01
RC-538 (2.40-3.60)	-48 +65	26.19	11.89	0.73	0.40	0.84	40.81	26.16	11.92	0.73	0.39	0.78	40.88
RC-538 (4.80-5.41)	-35 +48	28.24	6.65	0.78	0.36	0.58	45.43	28.12	6.71	0.77	0.36	0.65	45.31
RC-540 (1.00-2.00)	-48 +65	26.82	4.19	0.78	0.56	0.63	41.57	26.80	4.18	0.80	0.58	0.66	42.24
RC-540 (2.00-3.00)	-48 +65	19.68	27.42	0.69	0.53	0.67	29.96	19.67	27.66	0.71	0.55	0.70	30.80
RC-542 (0.00-1.00)	-48 +65	25.25	10.30	0.75	0.50	0.56	37.88	25.21	10.43	0.75	0.50	0.55	37.97
RC-542 (1.00-1.94)	-48 +65	21.35	27.24	0.59	0.36	0.44	31.91	21.30	27.15	0.59	0.35	0.47	31.68
RC-543 (1.20-2.40)	-48 +65	24.98	14.99	0.71	0.49	0.71	37.94	24.37	14.64	0.72	0.49	0.66	37.86
RC-543 (2.40-3.24)	-35 +48	25.92	9.54	0.69	0.35	0.55	38.36	26.59	9.53	0.71	0.34	0.58	38.87
RC-545 (0.00-1.00)	-48 +65	13.93	46.80	0.50	0.46	0.52	22.88	13.33	46.80	0.50	0.47	0.52	21.85
RC-545 (1.00-2.00)	-65 +150	15.05	44.60	0.54	0.49	0.58	22.56	15.43	44.23	0.56	0.50	0.64	22.63
RC-545 (2.00-2.83)	-150 +200	5.28	80.92	0.37	0.42	0.56	7.83	5.29	80.65	0.38	0.42	0.60	7.88
RC-563 (0.00-1.20)	-48 +65	20.49	26.67	0.72	0.59	0.74	33.59	19.82	26.81	0.72	0.59	0.73	32.79
RC-563 (1.20-2.20)	-48 +65	23.33	18.96	0.77	0.60	0.89	36.17	22.86	19.34	0.75	0.58	0.85	35.32
RC-563 (2.20-3.19)	-48 +65	22.80	20.49	0.69	0.50	0.84	34.82	22.09	21.37	0.68	0.50	0.88	33.73

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
Lab Phase 7													
RC-251 (1.00-2.00)	-65+150	22.45	21.24	0.83	0.67	0.87	35.06	22.46	21.76	0.82	0.67	0.79	35.40
RC-251 (2.00-2.65)	-48+65	29.00	4.93	0.82	0.52	0.65	43.58	29.06	4.94	0.87	0.54	0.65	44.91
RC-260 (3.00-4.00)	-48+65	24.53	18.57	0.77	0.55	0.79	37.03	24.25	18.87	0.75	0.55	0.77	36.85
RC-260 (4.00-5.00)	-35+48	31.15	1.34	0.84	0.37	0.41	45.52	31.22	1.54	0.82	0.37	0.41	45.44
RC-260 (5.00-5.44)	-35+48	30.32	0.96	0.81	0.36	0.42	46.96	30.34	0.98	0.83	0.35	0.40	46.94
RC-262 (1.00-2.00)	-48+65	25.08	14.70	0.81	0.62	0.74	39.31	25.75	14.64	0.83	0.63	0.75	40.90
RC-262 (2.00-2.63)	-35+48	30.61	1.50	0.79	0.24	0.40	46.62	30.43	1.44	0.80	0.24	0.40	46.44
RC-344 (2.28-3.20)	-48+65 Rep	29.37	3.72	0.82	0.38	0.54	44.57	29.56	3.60	0.82	0.37	0.51	44.74
RC-344 (3.40-4.40)	-65+150	30.25	2.46	0.79	0.27	0.53	46.32	30.35	2.36	0.81	0.26	0.49	46.42
RC-344 (4.40-5.00)	-48+65	30.53	1.34	0.77	0.25	0.36	47.57	30.44	1.30	0.77	0.24	0.33	46.64
RC-345 (3.00-4.00)	-48+65 Rep	28.23	7.01	0.76	0.37	0.65	42.53	28.51	6.48	0.77	0.37	0.62	43.27
RC-345 (4.00-4.69)	-65+150	28.13	9.21	0.72	0.32	0.50	42.44	28.29	8.92	0.72	0.32	0.49	43.16
RC-346 (4.00-4.90)	-65+150	24.42	15.34	1.16	0.36	0.67	38.96	24.41	15.00	1.11	0.36	0.73	38.05
RC-348 (3.00-4.20)	-48+65	21.46	28.04	0.73	0.74	0.84	33.63	21.09	28.78	0.69	0.70	0.67	33.32
RC-355 (3.00-4.00)	-48+65	26.48	9.43	0.80	0.52	0.69	41.80	26.32	10.07	0.81	0.52	0.62	42.23
RC-355 (4.00-5.00)	-48+65	29.25	2.64	0.84	0.43	0.63	45.30	29.66	2.56	0.84	0.42	0.59	45.73
RC-355 (5.00-5.55)	-35+48	31.05	0.71	0.79	0.36	0.43	46.00	31.18	0.64	0.81	0.36	0.45	46.32
RC-356 (3.60-4.60)	-48+65	28.94	4.31	0.84	0.47	0.67	44.79	28.80	4.41	0.82	0.46	0.65	44.74
RC-356 (4.60-5.55)	-35+48	29.45	0.95	0.82	0.35	0.38	46.54	29.60	0.72	0.83	0.35	0.31	47.44
RC-359 (5.00-5.71)	-48+65	30.44	2.73	0.79	0.34	0.37	44.52	30.03	3.01	0.85	0.37	0.43	47.11
RC-455 (0.00-1.20)	-48+65	25.07	6.07	1.07	1.18	0.67	44.17	25.27	5.79	1.05	1.16	0.64	44.06
RC-455 (1.20-2.40)	-35+48	29.59	1.17	0.84	0.45	0.48	46.83	29.64	1.10	0.86	0.45	0.50	47.24
RC-455 (2.40-3.60)	-35+48	29.90	1.53	0.81	0.41	0.43	45.32	29.73	1.54	0.79	0.41	0.40	46.05
RC-455 (3.60-4.60)	-48+65	28.18	5.55	0.78	0.47	0.65	44.19	28.37	5.46	0.80	0.48	0.67	44.76
RC-455 (4.60-5.23)	-48+65	27.15	9.65	0.75	0.36	0.65	42.10	27.83	9.12	0.76	0.36	0.66	43.32
RC-456 (0.00-1.00)	-35+48	22.56	6.07	1.05	1.12	0.57	45.80	22.70	6.19	1.08	1.16	0.61	45.07
RC-456 (1.00-2.00)	-20+35	28.57	1.17	0.87	0.46	0.50	46.18	28.44	1.15	0.87	0.45	0.50	46.40
RC-456 (2.00-3.00)	-48+65	28.82	2.63	0.83	0.48	0.48	44.89	29.40	2.67	0.85	0.48	0.46	45.50
RC-456 (3.00-4.00)	-35+48	29.30	4.05	0.82	0.47	0.49	44.58	29.25	4.14	0.82	0.47	0.50	44.13

		P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-456 (4.00-5.20)	-48 +65	28.42	5.35	0.79	0.44	0.52	43.17	28.60	5.17	0.79	0.44	0.52	43.38
RC-457 (1.00-2.00)	-48 +65	27.52	2.09	0.90	0.62	0.56	44.84	27.53	2.18	0.90	0.62	0.55	45.01
RC-457 (2.00-2.98)	-35 +48	28.05	1.52	0.82	0.47	0.48	45.50	28.75	1.47	0.84	0.47	0.50	45.42
RC-458 (3.00-4.00)	-65 +150	23.00	16.48	0.85	0.71	0.74	37.20	23.08	16.38	0.85	0.71	0.81	36.82
RC-458 (4.00-5.16)	-48 +65	28.84	4.02	0.85	0.48	0.66	42.93	28.48	4.13	0.87	0.48	0.58	44.75
RC-590 (2.95-3.95)	-48 +65	13.14	54.50	0.42	0.38	0.58	19.70	12.20	54.90	0.40	0.38	0.50	18.59
RC-591 (1.20-2.40)	-65 +150	9.04	66.80	0.45	0.64	0.63	14.39	9.11	66.95	0.45	0.63	0.58	14.27
RC-591 (2.40-3.60)	-48 +65	29.10	5.94	0.73	0.32	0.51	41.90	29.06	6.02	0.72	0.32	0.49	42.06
RC-593 (1.20-2.40)	-65 +150	22.49	20.75	0.86	0.60	0.73	34.19	22.45	20.70	0.87	0.60	0.75	34.12
RC-593 (2.40-3.60)	-48 +65	29.08	1.39	0.83	0.42	0.46	45.33	28.97	1.24	0.84	0.43	0.47	46.35
RC-593 (3.60-4.65)	-35 +48	29.56	1.40	0.84	0.41	0.49	46.49	29.71	1.47	0.85	0.43	0.50	47.17
RC-594 (1.20-2.40)	-65 +150	17.56	33.76	0.74	0.83	0.74	31.77	17.63	33.23	0.73	0.84	0.75	32.11
RC-594 (2.40-3.60)	-65 +150	19.54	26.36	1.08	0.65	0.81	33.40	19.82	25.79	1.08	0.67	0.95	33.66
RC-594 (3.60-4.63)	-35 +48	28.90	2.29	0.85	0.42	0.64	45.29	28.88	2.57	0.85	0.42	0.63	45.61
RC-595 (2.40-3.61)	-48 +65	21.68	21.77	0.86	0.62	0.91	35.93	21.95	20.87	0.87	0.62	0.83	36.37
RC-596 (0.00-1.20)	-48 +65	20.00	29.20	0.82	0.93	0.83	32.71	19.81	29.65	0.81	0.92	0.73	32.49
RC-596 (1.20-2.40)	-35 +48	29.97	1.28	0.82	0.45	0.39	46.20	29.70	1.31	0.83	0.45	0.39	46.23
RC-596 (2.40-3.60)	-35 +48	30.30	2.23	0.81	0.36	0.48	46.25	30.00	2.58	0.80	0.36	0.47	45.54
RC-596 (3.60-4.83)	-35 +48	29.87	2.94	0.76	0.25	0.40	45.59	29.54	2.88	0.76	0.25	0.40	45.95
RC-598 (0.00-1.20)	-35 +48	27.98	1.67	0.97	0.83	0.44	47.30	27.89	1.63	0.96	0.83	0.43	46.76
RC-598 (1.20-2.40)	-48 +65	28.55	5.11	0.80	0.50	0.64	45.05	28.05	6.77	0.81	0.53	0.72	45.10
RC-598 (2.40-3.60)	-35 +48	29.35	3.55	0.77	0.29	0.43	45.22	29.70	2.74	0.77	0.29	0.40	45.95
RC-598 (3.60-4.80)	-35 +48	30.97	0.42	0.79	0.22	0.25	49.03	30.99	0.46	0.77	0.22	0.27	49.06
RC-600 (0.00-1.20)	-48 +65	25.29	14.33	0.83	0.76	0.71	39.27	25.88	12.61	0.85	0.76	0.72	40.50
RC-600 (1.20-2.40)	-48 +65	28.71	6.19	0.75	0.34	0.52	43.80	28.93	5.64	0.76	0.33	0.49	44.72
RC-600 (2.40-3.45)	-35 +48	29.92	2.07	0.76	0.23	0.30	47.33	30.17	2.04	0.74	0.23	0.31	46.64
RC-603 (1.20-2.20)	-48 +65	27.73	8.66	0.78	0.61	0.49	42.93	28.01	8.15	0.82	0.63	0.53	44.52

31.2 BLANK ASSAYS

A sample for blank assays was dispersed throughout the samples submitted for chemical analysis and analyzed for P_2O_5, Fe_2O_3, Al_2O_3, MgO and CaO. The following table reports the blank sample results for Laboratory Phases 3, 4, 5, 6 and7. The conclusion is that the blank samples provided appropriate Quality Assurance and Quality Control.

	P_2O_5	Insol	MgO	Fe_2O_2	Al_2O_2	CaO
Phase 3						
RC-308 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-308 (1.00-1.60)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-312 (0.00-0.76)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-322 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-322 (3.00-4.07)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-364 (1.78-2.78)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-364 (3.78-4.14)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-364 (4.88-5.86)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-209 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-209 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-321 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-321 (4.00-4.66)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-383 (1.20-2.40)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-384 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-384 (2.00-2.58)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-379 (1.20-2.40)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-379 (3.60-4.80)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-380 (1.20-2.40)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-380 (3.50-4.53)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-381 (1.20-2.40)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-381 (3.60-4.30)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-423 (1.20-2.40)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-418 (0.00-1.20)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-418 (2.40-3.21)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-419 (1.27-2.40)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-420 (0.00-1.20)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-420 (2.40-3.40)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-421 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-421 (1.00-1.85)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-422 (1.00-1.61)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-426 (2.40-3.58)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-427 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-425 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-425 (2.00-3.00)	<0.01		<0.01	<0.02	<0.03	<0.2

	P_2O_5	Insol	MgO	Fe_2O_2	Al_2O_2	CaO
RC-424 (1.20-2.40)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-428 (0.00-1.20)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-429 (0.00-1.20)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-430 (1.20-2.40)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-400 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-401 (1.00-1.64)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-398 (3.60-4.60)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-397 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-397 (2.00-2.84)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-394 (1.20-2.40)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-394 (2.40-3.60)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-396 (2.40-3.60)	<0.01		<0.01	<0.02	<0.03	<0.2
RC-395 (2.40-3.60)	<0.01		<0.01	<0.02	<0.03	<0.2
Phase 4						
RC-728 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-729 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-729 (2.00-3.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-730 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-732 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-733 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-733 (2.00-2.50)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-734 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-736 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-737 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-737 (2.00-3.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-739 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-740 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-740 (2.00-3.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-740 (3.00-4.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-741 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-741 (2.00-3.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-742 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-742 (2.00-3.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-743 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-743 (2.00-3.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-743 (4.00-5.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-744 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-745 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-745 (2.00-3.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-745 (3.00-4.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-746 (0.00-1.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-746 (2.00-3.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-746 (4.00-4.50)	<0.01		<0.01	<0.02	<0.03	<0.03

	P_2O_5	Insol	MgO	Fe_2O_2	Al_2O_2	CaO
RC-751 (2.00-3.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-751 (4.00-5.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-764 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-764 (3.00-4.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-771 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.03
RC-773 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.03
Phase 5						
RC-773 (2.00-3.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-775 (0.00-1.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-775 (2.00-3.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-776 (0.00-1.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-776 (2.00-3.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-780 (0.00-1.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-781 (0.00-1.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-781 (2.00-2.70)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-782 (1.00-2.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-783 (0.00-1.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-785 (1.00-2.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-239 (2.00-2.71)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-283 (1.00-2.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-286 (1.00-2.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-287 (2.00-3.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-310 (0.00-1.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-310 (2.00-3.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-324 (2.00-3.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-328 (3.00-4.13)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-366 (1.20-2.40)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-371 (2.00-3.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-371 (1.20-2.40)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-373 (3.40-4.33)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-414 (1.20-2.40)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-414 (3.60-4.44)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-432 (2.40-3.60)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-434 (1.00-2.00)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-436 (1.20-2.40)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-439 (1.20-2.40)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-440 (2.00-3.02)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-447 (1.20-2.40)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-448 (0.00-1.20)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-448 (2.40-3.60)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-451 (0.00-1.20)	<0.01		<0.01	<0.03	<0.04	<0.4
RC-451 (1.20-2.40)	<0.01		<0.01	<0.03	<0.04	<0.4

	P_2O_5	Insol	MgO	Fe_2O_2	Al_2O_2	CaO
Phase 6						
RC-512 (2.40-3.60)	<0.01		<0.01	<0.02	<0.03	<0.15
RC-517 (1.20-2.40)	<0.01		<0.01	<0.02	<0.03	<0.15
RC-535 (0.00-1.20)	<0.01		<0.01	<0.02	<0.03	<0.15
RC-535 (2.40-3.60)	<0.01		<0.01	<0.02	<0.03	<0.15
RC-538 (1.20-2.40)	<0.01		<0.01	<0.02	<0.03	<0.15
RC-538 (4.80-5.41)	<0.01		<0.01	<0.02	<0.03	<0.15
RC-540 (2.00-3.00)	<0.01		<0.01	<0.02	<0.03	<0.15
RC-542 (1.00-1.94)	<0.01		<0.01	<0.02	<0.03	<0.15
RC-543 (2.40-3.24)	<0.01		<0.01	<0.02	<0.03	<0.15
RC-545 (1.00-2.00)	<0.01		<0.01	<0.02	<0.03	<0.15
RC-563 (0.00-1.20)	<0.01		<0.01	<0.02	<0.03	<0.15
RC-563 (2.20-3.19)	<0.01		<0.01	<0.02	<0.03	<0.15
Phase 7						
RC-251 (1.00-2.00)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-262 (1.00-2.00)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-344 (3.40-4.40)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-345 (4.00-4.69)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-346 (4.00-4.90)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-355 (3.00-4.00)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-355 (3.00-4.00)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-356 (3.60-4.60)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-359 (5.00-5.71)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-455 (1.20-2.40)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-455 (3.60-4.60)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-456 (0.00-1.00)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-456 (2.00-3.00)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-456 (4.00-5.20)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-457 (2.00-2.98)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-458 (4.00-5.16)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-590 (2.95-3.95)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-591 (1.20-2.40)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-591 (2.40-3.60)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-593 (1.20-2.40)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-593 (3.60-4.65)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-594 (2.40-3.60)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-594 (3.60-4.63)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-596 (1.20-2.40)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-596 (3.60-4.83)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-598 (1.20-2.40)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-598 (2.40-3.60)	<0.01		<0.01	<0.01	<0.04	<0.30

	P_2O_5	Insol	MgO	Fe_2O_2	Al_2O_2	CaO
RC-600 (0.00-1.20)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-600 (2.40-3.45)	<0.01		<0.01	<0.01	<0.04	<0.30
RC-603 (1.20-2.20)	<0.01		<0.01	<0.01	<0.04	<0.30

31.3 CHECK SAMPLE

The following data and statistics were derived for the Check 22 sample supplied by the Association of Fertilizer and Phosphate Chemists and dispersed through the assays for Laboratory Phases 3, 4, 5, 6 and 7.

FIPR Lab Statistics	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
Average	33.33	3.20	0.35	1.07	1.39	45.75
Std. Dev.	0.52	0.11	0.01	0.06	0.06	1.42
Maximum	34.58	3.58	0.37	1.51	1.59	49.89
Minimum	31.24	2.88	0.32	0.95	1.24	41.41
Count	150	150	150	150	150	150
AFPC Statistics						
Average	33.06	3.19	0.35	1.10	1.42	47.74
Std. Dev.	0.17	0.26	0.01	0.03	0.03	0.38

	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
Lab Phase 3						
RC-308 (0.00-1.00)	33.37	3.33	0.34	1.04	1.36	44.43
RC-308 (1.00-1.60)	33.18	3.49	0.34	1.03	1.37	44.08
RC-312 (0.00-0.76)	33.69	3.27	0.35	1.04	1.44	44.65
RC-322 (0.00-1.00)	33.13	3.26	0.36	1.11	1.42	45.58
RC-322 (2.00-3.00)	33.61	3.18	0.35	1.06	1.39	44.53
RC-364 (0.78-1.78)	33.98	3.22	0.35	1.04	1.41	44.00
RC-364 (2.78-3.78)	33.78	3.30	0.36	1.10	1.45	47.41
RC-364 (4.14-4.88)	33.49	3.28	0.33	1.05	1.34	44.85
RC-209 (0.00-1.00)	33.49	3.28	0.34	1.04	1.38	44.29
RC-209 (1.00-2.00)	33.61	3.14	0.33	1.02	1.29	43.47
RC-321 (0.00-1.00)	33.79	3.34	0.34	1.03	1.36	44.31
RC-321 (2.00-3.00)	33.04	3.33	0.35	1.05	1.41	44.68
RC-383 (0.00-1.20)	33.75	3.16	0.35	1.06	1.33	45.04
RC-383 (1.20-2.40)	32.97	3.12	0.34	1.05	1.36	44.56
RC-384 (0.00-1.00)	33.37	3.33	0.32	0.99	1.24	42.76
RC-379 (0.00-1.20)	33.48	3.33	0.34	1.05	1.33	44.63
RC-379 (2.40-3.60)	33.38	3.26	0.35	1.03	1.35	43.87
RC-379 (4.80-6.00)	33.01	3.29	0.36	1.08	1.38	45.26
RC-380 (2.40-3.50)	32.73	3.36	0.36	1.11	1.39	47.28
RC-381 (2.40-3.60)	33.67	3.13	0.35	1.04	1.33	43.77
RC-423 (0.00-1.20)	33.41	3.14	0.35	1.05	1.44	44.39
RC-423 (1.20-2.20)	33.72	3.18	0.35	1.06	1.33	43.96
RC-419 (0.00-1.10)	33.12	3.30	0.34	1.07	1.37	45.87
RC-419 (2.40-3.60)	33.09	3.30	0.35	1.03	1.59	44.57
RC-420 (1.20-2.40)	33.08	3.51	0.33	1.01	1.29	43.84
RC-420 (3.40-3.97)	33.11	2.99	0.34	1.04	1.37	44.57
RC-422 (0.00-1.00)	33.27	3.16	0.35	1.07	1.39	45.36
RC-426 (0.00-1.20)	33.29	3.31	0.34	1.04	1.32	44.74
RC-427 (0.00-1.00)	32.74	3.35	0.34	1.06	1.35	44.97
RC-427 (1.00-1.93)	32.94	3.25	0.34	1.05	1.31	44.22

	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-425 (2.00-3.00)	32.69	3.49	0.33	1.02	1.33	42.76
RC-425 (3.00-3.90)	33.13	3.11	0.34	1.06	1.33	45.27
RC-428 (1.20-2.20)	32.93	3.31	0.34	1.06	1.33	44.74
RC-429 (1.20-2.37)	33.10	3.21	0.34	1.05	1.30	43.96
RC-401 (1.00-1.64)	33.17	3.34	0.35	1.07	1.31	45.25
RC-398 (1.20-2.40)	32.54	3.12	0.33	1.04	1.31	44.60
RC-397 (0.00-1.00)	33.11	3.33	0.34	1.08	1.34	45.91
RC-397 (1.00-2.00)	32.95	3.27	0.34	1.07	1.33	45.62
RC-394 (1.20-2.40)	33.09	3.25	0.33	1.04	1.31	44.67
RC-394 (2.40-3.60)	32.92	3.23	0.34	1.06	1.32	45.04
RC-396 (1.20-2.40)	33.17	3.16	0.34	1.06	1.33	45.47
RC-395 (2.40-3.60)	33.00	2.88	0.35	1.09	1.36	45.33
Lab Phase 4						
RC-728 (0.00-1.00)	32.65	3.30	0.37	1.12	1.50	49.10
RC-728 (2.00-3.00)	32.98	3.19	0.36	1.11	1.43	48.51
RC-729 (2.00-3.00)	32.98	3.22	0.37	1.51	1.48	49.62
RC-730 (0.00-1.00)	33.12	3.24	0.36	1.11	1.46	47.26
RC-732 (1.00-2.00)	32.93	3.12	0.35	1.12	1.41	48.32
RC-733 (1.00-2.00)	33.46	3.27	0.35	1.08	1.41	47.34
RC-734 (1.00-2.00)	33.80	3.23	0.34	1.08	1.34	47.00
RC-737 (0.00-1.00)	33.22	3.16	0.35	1.09	1.41	46.81
RC-737 (2.00-3.00)	33.25	3.17	0.35	1.09	1.41	46.88
RC-739 (1.00-2.00)	33.11	3.19	0.33	1.04	1.31	44.48
RC-739 (2.00-3.00)	33.46	3.33	0.34	1.10	1.35	46.83
RC-740 (1.00-2.00)	32.91	3.28	0.33	1.06	1.34	45.30
RC-741 (1.00-2.00)	33.23	3.18	0.34	1.05	1.34	45.28
RC-741 (3.00-3.70)	32.90	3.11	0.32	1.04	1.27	44.56
RC-742 (1.00-2.00)	33.03	3.17	0.33	1.04	1.28	45.93
RC-742 (3.00-3.70)	33.15	3.18	0.34	1.04	1.38	44.48
RC-743 (3.00-4.00)	33.55	3.23	0.34	1.09	1.36	46.64
RC-743 (5.00-5.70)	33.13	3.28	0.36	1.08	1.42	46.55
RC-745 (1.00-2.00)	33.31	3.23	0.36	1.08	1.44	46.60
RC-745 (3.00-4.00)	32.54	3.26	0.34	1.05	1.33	44.97
RC-746 (1.00-2.00)	32.93	3.14	0.33	1.02	1.30	44.13
RC-746 (3.00-4.00)	32.63	3.25	0.34	1.08	1.37	46.76
RC-751 (1.00-2.00)	32.39	3.25	0.36	1.10	1.45	46.54
RC-751 (3.00-4.00)	33.75	3.20	0.35	1.08	1.40	45.88
RC-759 (1.00-2.00)	34.58	3.34	0.35	1.08	1.40	45.98
RC-764 (2.00-3.00)	33.17	3.07	0.35	1.09	1.40	46.69
RC-770 (2.00-3.00)	33.46	3.17	0.36	1.08	1.43	46.11

	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
Lab Phase 5						
RC-771 (2.00-3.00)	34.11	3.09	0.36	1.12	1.44	46.23
RC-773 (2.00-3.00)	33.26	3.11	0.34	1.06	1.39	45.31
RC-775 (0.00-1.00)	33.55	3.12	0.34	1.06	1.38	45.54
RC-775 (2.00-3.00)	32.87	3.27	0.32	1.01	1.27	43.40
RC-776 (0.00-1.00)	33.14	3.16	0.35	1.08	1.39	47.33
RC-776 (2.00-3.00)	33.61	3.12	0.34	1.08	1.37	46.73
RC-780 (0.00-1.00)	33.60	3.18	0.37	1.08	1.37	45.89
RC-781 (0.00-1.00)	33.64	3.16	0.35	1.08	1.42	46.35
RC-781 (2.00-2.70)	33.58	3.10	0.35	1.07	1.39	46.85
RC-782 (1.00-2.00)	33.92	3.18	0.35	1.09	1.40	46.96
RC-783 (0.00-1.00)	33.63	3.15	0.36	1.09	1.44	47.21
RC-785 (1.00-2.00)	34.07	3.21	0.37	1.13	1.49	49.89
RC-239 (2.00-2.71)	33.08	3.20	0.35	1.07	1.39	45.91
RC-283 (1.00-2.00)	32.97	3.06	0.35	1.08	1.42	46.03
RC-286 (1.00-2.00)	33.26	3.10	0.35	1.09	1.39	47.83
RC-286 (3.00-4.16)	33.18	3.08	0.35	1.11	1.41	47.67
RC-287 (2.00-3.00)	33.02	3.02	0.35	1.06	1.38	46.19
RC-310 (0.00-1.00)	34.04	3.13	0.35	1.07	1.44	46.37
RC-310 (2.00-3.00)	33.91	3.21	0.36	1.08	1.48	46.62
RC-324 (2.00-3.00)	34.32	3.07	0.36	1.11	1.45	47.21
RC-328 (3.00-4.13)	33.80	3.03	0.34	1.05	1.36	45.12
RC-366 (1.20-2.40)	33.93	3.23	0.34	1.04	1.39	43.84
RC-371 (2.00-3.00)	33.58	3.19	0.35	1.07	1.37	45.72
RC-373 (1.20-2.40)	33.67	3.10	0.34	1.06	1.34	45.72
RC-373 (3.40-4.33)	34.42	3.02	0.34	1.05	1.39	45.89
RC-414 (1.20-2.40)	34.34	3.18	0.34	1.06	1.34	46.37
RC-414 (3.60-4.44)	33.39	3.28	0.35	1.06	1.44	45.67
RC-432 (2.40-3.60)	33.07	3.17	0.35	1.10	1.43	47.98
RC-434 (1.00-2.00)	32.76	3.10	0.35	1.09	1.42	46.66
RC-436 (1.20-2.40)	33.73	3.06	0.36	1.08	1.42	44.95
RC-439 (1.20-2.40)	34.02	3.07	0.34	1.03	1.40	44.20
RC-440 (2.00-3.02)	31.24	3.21	0.34	1.03	1.35	44.16
RC-447 (1.20-2.40)	34.16	3.25	0.34	1.06	1.42	45.37
RC-448 (0.00-1.20)	34.38	3.09	0.33	1.04	1.36	44.77
RC-448 (2.40-3.60)	33.46	3.05	0.36	1.30	1.39	46.06
RC-451 (1.20-2.40)	33.70	3.08	0.35	1.41	1.38	46.17
Lab Phase 6						
RC-516 (1.20-2.40)	33.78	3.14	0.34	1.07	1.39	46.09
RC-516 (3.40-4.27)	34.08	3.05	0.34	1.07	1.41	46.60
RC-517 (1.20-2.40)	33.65	3.14	0.35	1.07	1.40	45.96
RC-535 (1.20-2.40)	33.93	3.12	0.35	1.06	1.41	45.32
RC-535 (2.40-3.40)	33.90	3.12	0.35	1.05	1.41	45.28
RC-535 (3.40-4.14)	33.27	3.05	0.35	1.05	1.41	46.26

	P_2O_5	Insol	MgO	Fe_2O_3	Al_2O_3	CaO
RC-538 (2.40-3.60)	33.35	3.03	0.36	1.11	1.51	49.21
RC-540 (1.00-2.00)	32.43	3.13	0.34	1.01	1.35	43.91
RC-540 (2.00-3.00)	32.31	3.22	0.32	0.95	1.28	41.41
RC-543 (1.20-2.40)	32.95	3.30	0.34	1.01	1.33	43.76
RC-545 (0.00-1.00)	33.31	3.23	0.33	0.98	1.29	43.16
RC-545 (2.00-2.83)	32.82	3.33	0.35	1.08	1.45	46.67
RC-563 (1.20-2.20)	33.33	3.58	0.34	1.01	1.39	44.42

32.0 APPENDIX H: STRATA CALCULATION PROCEDURE AND REPORTS

Due to the lengthy content of Appendix H, it will be published in a separate volume.

33.0 APPENDIX I: HOLE COMPOSITE CALCULATION PROCEDURE AND REPORTS

Due to the lengthy content of Appendix I, it will be published in a separate volume.

34.0 APPENDIX J: RESOURCE CALCULATION PROCEDURES AND TABLES

Due to the lengthy content of Appendix J, it will be published in a separate volume.