

**SUMMARY OF POET TECHNOLOGIES, INC.
INTELLECTUAL PROPERTY
INCOME VALUATION REPORT**

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It is important to note that a third party valuation is not an indication of interest by any party, nor does it represent an actual offer to purchase the POET intellectual property. As indicated in the report, the POET technology is still under development, and no assurances can be given that such development will be successfully completed, that the technology will be brought to commercial realization or that the Company's target markets will adopt this technology. Commercial applications of the technology will likely not be available for several years, if ever.

The fair market value estimate in the appraisal report does not necessarily reflect the actual price that the Company could realize from a true sale of its technology in a real market. Rather, the valuation reflects the notional value of the technology in an assumed market. This assumed market considers, among other things, the historic and prospective value of the technology in light of the associated business risk. The notional value does not include possible synergistic benefits or economies of scale that might accrue to the potential purchaser not already captured in the report. The notional value was also derived utilizing various assumptions and estimates relating to growth, establishing new markets, expansion into new markets and related plans other than statements of historical fact, which are forward-looking statements subject to a number of

uncertainties that could cause actual value to differ materially from the third party valuation. P&A makes no representations or assurances as to the Company's plans or ability to effect any planned and/or proposed actions. Furthermore, P&A derived its valuation based on certain technical information provided by the Company and related sources believed by the valuation firm to be reliable, but the valuation firm did not undertake an independent verification of the accuracy and completeness of this information, and no representation, expressed or implied, is made as to its accuracy, completeness or correctness. P&A is not an investment advisor, and its report is not investment advice.

In the real market, the technology could generate as many prices as there are buyers in the market, with each buyer having the ability to pay its own specific price based on its own specific set of circumstances. In the end, the final price will be the result of a set of negotiations between buyers and sellers that the valuation firm could not ascertain or forecast for the purpose of its engagement. However, P&A did test its value conclusions to ensure that there was a reasonable economic basis for its value opinion.

P&A prepared its report in accordance with the Uniform Standards of Professional Appraisal Practice ("USPAP"). The Company paid P&A a flat fee for its analysis that was in no way contingent on achieving any predetermined value conclusion. Further, P&A has no current or contingent interest in the Company and has no duty to update its analysis to account for subsequent events.

Engagement Overview

The Company engaged P&A to perform a detailed analysis to identify, develop, and report on the fair market value of the Company's intellectual property portfolio based on the Company's contemporary business plans. The property subject to consideration includes economic income attributable to the Company's POET intellectual property portfolio as it applies to the following items (hereinafter referred to as the "Subject Property"): the general computer market, which consists primarily of server computers, desktop computers, and laptop computers; the defense contractor market; the smartphone/tablet market; the memory market; the optical transceiver market; the baseband processor market; and the graphics processing unit market.

POET addresses a broad spectrum of applications (e.g., communications lasers, infrared sensors, pixel arrays, etc.) that may extend well beyond the basic licensing scenarios that P&A modeled, however, they did not consider or value any other assets or market applications in this valuation report nor did they conduct a fairness opinion for the Company.

Approaches to Determining Value

Three accepted approaches to valuing the Subject Property exist: the market approach (or sales comparison approach), the income approach, and the cost approach. Given the wide use and

acceptance of the income approach to valuing intellectual property and P&A's ability to apply it to this engagement in a manner consistent with valuation standards, in its opinion, based upon a reasonable degree of probability within the valuation profession, the income approach provided a credible value indication for the Subject Property.

Value Conclusion Using the Income Approach

P&A performed 10,000 simulations on two income valuation models using a Latin Hypercube sampling algorithm for 10,000 total value calculations.

The valuation model indicates the fair market value of the Subject Property in the markets considered at a 90% confidence level is between **\$851,235,961** and **\$4,271,102,920** with a mean value of **\$2,415,029,242** and a median value of **\$2,330,489,354**. P&A used the statistical median as their expected value, as it removes the impact of improbable outliers. Therefore, in P&A's opinion, based upon a reasonable degree of probability within the valuation profession, the fair market value of the Subject Property in the context of the POET licensing program is **\$2,330,489,354** using the income approach to value.

Core Engagement Assumptions

The following list includes key assumptions that P&A made during the execution of the Engagement:

- P&A did not perform primary market research, where it would, for example, interview and categorize a statistically significant sample of possible buyers in the target market. Instead, P&A relied on other independent sources (e.g., Frost & Sullivan, Gartner Inc., etc.) for such market data.
- P&A did not review or evaluate each patent or each patent's claims individually, nor did P&A benchmark or evaluate the value proposition of each patent's claimed inventions in the market vis-à-vis competing solutions.
- P&A did not perform independent analysis to evaluate the strength of the Company's patent portfolio. P&A performed a sampling of U.S. patents as part of its analysis efforts and made certain assumptions regarding similarities and consistencies among various countries outside of the U.S. regarding the claim structure, the economic life, the market utility for inventions and the general patent rights that the Company holds.
- The Company would be able to operate at a level sufficient to fulfill the revenue forecast that the Company provided to P&A.
- The Company will have sufficient working capital in order to fulfill the revenue forecast that forms the basis for value conclusions presented within this report.
- The Company has the capability to license POET to one or more major semiconductor designers or manufacturers.
- The Company prospective customers agree with the value proposition identified in this report and agree to the general financial terms contained in the valuation model.

- All licensees remain solvent and can pay the Company's royalties in accordance with the terms of the Company's licenses.
- The market share among potential licensees does not vary enough to warrant any material change in the royalty amounts that we modeled.

The Company did not restrict P&A's scope of review in any material way. P&A could not verify certain value drivers directly (e.g., the rate of future project adoption or POET's success in an industrial scale). However, in P&A's opinion, based upon a reasonable degree of probability within the valuation profession, the scope provided P&A with the ability to generate credible valuation results.

Definition of Value Standard

P&A used the efficient market hypothesis (EMH), cross-referenced with the definition of fair market value in Revenue Ruling 59-60, to aid a reasonableness test analysis for the Subject Property. The EMH is an investment theory that reflects the diffusion of information and the integration of it in the value of assets. The EMH provides an important context for understanding the definition of fair market value, particularly with respect to available information and the reflection of such information in value.

The intended use of the opinions and conclusions in P&A's valuation report is to provide a value basis that the Company can use to guide its internal strategic decision making processes. **The intended use expressly excludes any other purpose.**

P&A based its opinions and conclusions presented in its valuation report upon a reasonable degree of probability within the valuation profession; however, the intended users understand that they cannot interpret P&A's opinions and conclusions as a guarantee of value. P&A performed this engagement specifically for POET Technologies, Inc. The intended users of P&A's valuation report are the Company's executive management team.

Effective Date

The effective date of the opinions and conclusions in P&A's report is **March 1, 2014** and the effective date of the written report is **July 22, 2014**.

Significant Differences From Prior Valuation

P&A performed a valuation of the Company's intellectual property portfolio in 2010. The format, content, and conclusions presented in this valuation report differ dramatically from the prior work product that P&A produced. P&A's contemporary work product reflects the influences of new markets considered, new market dynamics, new developments in POET, a new management team, and a new focus on POET, among others. Significant changes include the following:

- Elimination of all grant-funded revenues.
- Lower running royalty rate compared to what P&A modeled originally.
- Longer validation and development process compared with what P&A modeled originally.
- Narrower focus in the computer marketplace, focusing only on about the top 10%-20% of computers sold that may benefit from POET usage as opposed to most computers sold that employ processors sold by a particular licensee.
- Narrower customer base and a different revenue model, dependent more heavily initially on up-front, nonrecurring engineering fees as opposed to product royalties.
- Different royalty structure with the University of Connecticut.
- Addition of several market applications not previously considered.
- Company representatives would not be able to license POET on a value basis to its licensees, whereby the Company captures a percentage of the total value of the product sales.

Naturally, all of these factors drive some of the key material differences in the value conclusion in P&A's report compared with P&A's prior work product. Given the dramatically different structure of the valuation model that P&A built for this report versus the prior report, P&A were not able to localize the variances specifically to the items that P&A highlighted.

Considerations of New Management Team

P&A's prior valuation conclusion depended heavily on representations and warranties made by the Company's prior management team. Significant representations and warranties that P&A depended on included the following:

- Company representatives would have the POET platform commercially ready to sell within the timeline described in the original report.
- Company representatives would be able to close customers in the key markets that we modeled in accordance with the conditions that we modeled.
- Company representatives would be able to license POET on a value basis to its licensees, whereby the Company captures a percentage of the total value of the end product sales.
- The Company would be able to generate grant revenues in accordance with the schedule that the Company representatives provided to P&A.

- The Company would incur a cost structure in accordance with the budget that it provided to P&A.

Over the course of the nearly four years that transpired since P&A's initial work with the Company team, P&A knew that the prior Company team was not able to actualize many of the previous significant conditions that P&A modeled in their valuation model. Critical review of P&A's work product gives rise to the necessity to discuss the significant departure by the prior Company management team to the prior monetization plan and revenue forecast that P&A developed in concert with the prior Company management team. The prior underperformance may give rise to a higher degree of uncertainty associated with a contemporary revenue forecast developed in concert with the Company management team or a greater uncertainty associated with future forecasting activities. P&A probed the current Company management team in detail regarding what circumstances might be different for this engagement compared with P&A's prior engagement.

P&A found the current Company team to be quite receptive to such a sensitive discussion. P&A found Company representatives to be realistic about the significant factors of differentiation for the current management team compared with the prior management team. They are as follows:

- **New team in place:** The Company in some respects starts with a clean slate. Except for Mr. Pierhal, every member of the board of directors and senior management is new to the company since 2012. Each member brings a fresh set of eyes to a company embroiled in a longer, dynamic history in the solar industry.
- **New clarity on monetization pathway:** In our discussions with Company representatives during this project, we found a remarkable clarity on the monetization pathway for the Company. In particular, the Company has recently staffed the Company with a seasoned professional in the semiconductor, telecommunications, and process industries. Company staff now has a deliberate and detailed plan of action that provides P&A with a greater degree of confidence in the forecast that P&A developed in concert with Company representatives.
- **New strategic relationships:** Per Company representatives, the Company is developing today a strategic relationship with a leading company in the electronic design automation industry which works with all major semiconductor designers and fabricators. Specifically, such company develops tools and provides services for digital system-on-chip designs. Per Company representatives, it will be much easier to market POET and to gain market acceptance, if and when, the Company can provide the associated structure models in a ready-to-use form, as is common with other technology providers.

- **More mature knowledge transfer process:** In P&A's prior engagement, the Company did not have such a maturity in knowledge transfer process as it does now, especially with the developing collaboration. In fact, Company representatives set a milestone to have a full technology development kit (TDK) documentation ready for delivery to prospective licensees by the end of Q1, 2014.
- **Greater executive energy:** Per discussions with Company representatives, the new executive team brings a great deal of new energy to the Company. Moreover, the Company today is a focused company that has only one objective — to bring POET to the marketplace. In 2010, the Company was a small component in a larger company focused in the solar industry. Today, the entire executive energy focuses on POET. There is no distraction from the solar company and the associated challenges that came with the solar operation.
- **New marketing efforts:** Per our discussions with Company representatives, the Company has been much more aggressive in marketing POET to market and PTI has already made inroads of varying degrees with several large technology companies based on marketing efforts in San Jose, CA and Austin, TX that started in mid-December, 2013. In addition, Company representatives are focusing on a higher degree of publication of technical milestones to enable greater market awareness and excitement for what POET has to offer.
- **Greater technology certainty:** Per discussions with PTI representatives, PTI today has less uncertainty with POET. PTI has had third party validation of a variety of the POET structures including the optical thyristor-based infrared detector array.
- **Financial stability:** Per discussions with Company representatives, as of the effective date of P&A's report, the Company had sufficient cash in the bank that, with its current burn rate, absent any cash flows from nonrecurring licenses fees, the Company could continue to operate for at least 27 more months from the effective date without having to raise any new capital. Moreover, Company representatives have stated that there are also significant outstanding warrants that are in the money and are exercisable; thus, such non-dilutive financing could provide the Company with any necessary cash infusions that Company representatives believe could sustain the Company's strategic plans. In short, unlike P&A's prior engagement, Company representatives believe they have no further need to go back to the market for additional funds to fulfill the basic strategies captured in P&A's report, however, they may seek further financing if warranted and appropriate.

Risk Associated With Subject Property Value

While certain sustainable competitive advantages exist relating to the Subject Property, there are also associated risks. The following are key risks P&A identified in their analysis:

- Possible long path to profitability;
- Many potential failure points;
- Unproven business model;
- Timing of revenues:
- Requirement to invest capital by end-users (Semiconductor fabricators and application developers that employ POET);
- Possible working capital need:
- Investor fatigue with the Company investment;
- Undercapitalization;
- High switching costs for existing semiconductor fabricators to implement the POET manufacturing process;
- Institutional resistance to change;
- Remaining economic life of pioneering patents may be too limited;
- Freedom to operate may be limited by reason of potential patent infringement claims;
- Management must execute the modeled business plan;
- Reliance on key personnel;
- Potential patent validity challenges;
- GaAs limitations;
- Attempts to design around patents;
- Limited functional prototypes;
- Necessity to decrease process size to be competitive;
- Unknown yield relative to the purity levels of the GaAs wafer;
- GaAs semiconductor fabrication capacity is currently limited because of dominance of Si substrate in the semiconductor market;
- Higher initial cost of GaAs;
- Emerging competitive technologies;
- GaAs manufacturing conversion time from Si to GaAs fabrication capacity by chipmakers;
- Legacy component support – potential reluctance by many product designers to integrate many versions of products into a single chip;
- Product development timeline - it will take time to design components based on POET.
- Time-to-market risk;
- Limited number of licensees - the number of licensees that the Company can approach varies by market;
- Industry Standards - the semiconductor industry relies heavily on industry standard architectures in each market segment;
- Litigation costs - IP litigation is the sport of kings and it is costly;
- Potential loss of opportunity to collect damages for any patent infringement that occurs before it registers its works with the U.S. Copyright Office;

- Functional realization of patents;
- Potential attempts to design around intellectual properties;

POET still carries developmental risk that P&A accounted for with its discount rate.

Income Approach Valuation Methodology

P&A used the discounted future economic income method of the income approach to establish value for the Subject Property. They built a discounted cash flow model for the valuation scenarios to determine the anticipated economic income from the rights to own and use over a discrete period. They then used the discounted cash flow method to determine the quasi-perpetual value component after the discrete period that they modeled. They used annual market data, revenue projections, revenue trends, investment data, and cost data as provided to us by the Company and sources that they reviewed independently as a basis for the value development. Subsequently, P&A integrated their findings into a valuation model, accounting for costs and appropriate capital needs. They then developed an appropriate discount rate to determine the value of respective assets as of the effective date, as they describe in the Discount Rate section of their report described below. They then discounted the economic income using that discount rate to determine a nominal value indication as of the report's effective date.

Discount Rate

The issue of selecting an appropriate discount rate is one of the most important decisions a valuation analyst has to make when using an income approach to value. The value impact of the discount rate is large. Larger discount rates lead to a lower value, and vice versa. When calculating the discount rate, the valuation analyst must consider the risk profile for the project and adjust the discount rate to account for additional risk. It is common that a company's weighted average cost of capital (WACC) or its cost of equity (depending on the financial structure of the asset under consideration) may be an appropriate proxy for an appropriate discount rate. P&A used a median discount rate at least 50% greater than what such models would suggest, employing a baseline discount rate of 32.90% that could vary above 40% depending on circumstances. In P&A's opinion, based upon a reasonable degree of probability within the valuation profession, this discount rate is appropriate for the Subject Property.

Sensitivity Analysis

P&A performed a regression analysis of key exogenous variables in the valuation model. While P&A modeled hundreds of discrete value drivers in the valuation model, the regression analysis suggests that the following key value drivers have the greatest impact on the overall value conclusion:

- Key licenses.
- The Company's ability to execute.
- Economic life of the patent portfolio.

In P&A's opinion, based upon a reasonable degree of probability within the valuation profession, the income approach provided a credible indication of value for this engagement for the following reasons:

- They had reasonable data and definitions for all revenues, operating costs, and capital needs.
- They simulated the business model 10,000 times to account for the uncertainty of certain valuation assumptions that we made in the valuation model.
- They tested the simulation results to ensure that they did not have conditions of multicollinearity, which could distort the statistical results that they generated.

In P&A's opinion, based upon a reasonable degree of probability within the valuation profession and the quantity and quality of available data, the income approach to value provided a credible value for this engagement.

Limiting Conditions

P&A presented their report subject to the following general contingent and limiting conditions:

- Users of this report must recognize that valuations are based on future earnings potential that may or may not materialize. Therefore, the actual results achieved during the forecast period will likely vary from the forecasts in this valuation and the variations may be material.
- Some assumptions invariably will not materialize. Unanticipated events and circumstances may occur. Therefore, the actual performance in any forecast areas will vary from what was forecasted. Those variations may be material. P&A will not express any form of assurance on the likelihood of achieving the forecast or on the reasonableness of the assumptions used within this report. P&A does not intend for any forecasts described in this report to stand separate from its report.
- The value premise(s) cited in this report are fundamental to the value opinions rendered herein, and P&A reserves the right to reconsider such premise(s) should it discover subsequent or additional information, although no such obligation exists.
- P&A has relied upon the representations of the owners, management, and other qualified third parties concerning the value and useful condition of all assets under consideration, except as specifically stated to the contrary in this report. P&A has not attempted to confirm whether or not all assets are free and clear of liens and encumbrances, or that the owner has good title to all assets.
- Since neither management nor advisors have advised P&A otherwise, P&A assumes that there is full compliance with all applicable federal, state, and local laws and regulations unless the lack of compliance is stated, defined, and considered in the valuation report.
- P&A used public information and purchased private information and industry statistical information from sources it deems reliable; however, P&A makes no representation as to

the accuracy or completeness of such information and has accepted the information without further verification.

- P&A assumes no hidden or unapparent conditions regarding the Subject Property.
- P&A intends no opinion, counsel, or interpretation in matters that require legal or other appropriate professional advice. P&A presumes that the reader will obtain such opinions, counsel, or interpretations from appropriate professional sources.
- The analyses, opinions, and conclusions presented in this report apply to this engagement only and may not be used out of the context presented herein. This report is valid only for the effective date(s) specified and only for the purpose(s) specified herein.
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- This valuation reflects facts and conditions existing at the date of this valuation. P&A has not considered subsequent events, and P&A has no obligation to update its report for such events and conditions.
- P&A does not purport to be a guarantor of value. Valuation is an imprecise science, with value being a question of fact, and reasonable people can differ in their estimates of value. P&A, however, performed conceptually sound and commonly accepted methods and procedures of valuation in determining the estimate of value included in this report.

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- Liability of P&A and its partners and employees for errors and omissions, if any, in this work will be limited to the amount of its compensation for the work performed in this engagement, but only to the extent that such compensation has been paid to P&A.
- This report is further subject to any other contingencies, assumptions, and limiting conditions that may be set out elsewhere within this report.