

INVESTOR PRESENTATION

JUNE 2023









CAUTIONARY NOTE ON FORWARD-LOOKING STATEMENTS

This presentation contains forward-looking statements concerning our business operations, and financial performance and conditions, as well as our plans, objectives, and expectations for our business operations and financial performance and conditions that are subject to risks and uncertainties. All statements other than those of historical fact are forward-looking statements.

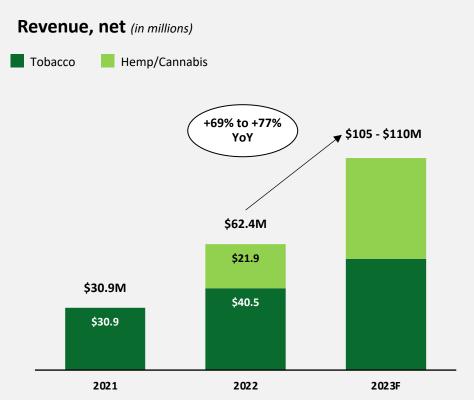
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2023: INITIAL REVENUE GUIDANCE \$105 - \$110 MILLION

Revenue and Margin Expected to Scale Through Year, Driving Business Units to Cash Positive in 2024



- 4Q 2022 & 1Q 2023 Tobacco volumes reflects transition away from lower margin filtered cigar business to reallocate capacity to higher margin store brand CMO and VLN® business ahead of volume ramp
- Hemp/cannabis revenues grew on record ingredient volumes and increased contract manufacturing activity even after the November 2022 Grass Valley fire

VLN® executing aggressive 2023 multi-state commercial launch program

- Exceptional product demand drives market share accumulation
- Launching thousands of new retail locations in CA, TX & FL
- More than 100 chains in the funnel, scheduling launches rest of 2023

GVB dominating ingredient, manufacturing and distribution roles

- Continued record ingredient volume drives market leading position
- \$140 million in exclusive CDMO+D agreements with two major brands
- Bringing on new distillate production facilities in Prineville, OR

New 2023 revenue guidance confirms growth outlook

- Expecting \$105 \$110 million in sales, +69% to +77% YoY
- Improving margin and operating performance
- Clear path to cash positive in business units in 2024



2023 REVENUE RAMP DRIVES 2024 CASH POSITIVE GOAL

Both VLN® and Hemp/Cannabis Business Lines Benefit from Improved Operating Performance Drivers

Commercializing FDA MRTP
Label for VLN® Reduced
Nicotine Content Products

Rapidly Scaling GVB
Cannabinoid Ingredient,
API and CDMO
Market Leadership

- Confirmed demand from both consumer and retail channels, updated marketing programs to support
 - Secured #1, #2 national scale distributors, #3, #4 and regional in discussions
 - Launching thousands of stores across largest U.S. state markets supported by updated marketing campaign; massive funnel of 100+ retailers in discussion or scheduling launches throughout rest of 2023
 - Commercial rollout in up to 18 U.S. States in 2023 represents 600+ million cartons of addressable market
- Shifting mix toward higher margin store brand CMO and VLN® volumes will increase operating profit
- Cash positive operations for tobacco business by second half 2024, including corporate overhead
- Accelerating across 3 distinct growth drivers and profit centers
 - Record ingredient volumes as dominant share leader in North America
 - Increased demand and new agreements drive CDMO volume growth
 - Multiple new exclusive fully verticalized sales and distribution agreements with major brands
- In-house growing, extraction and new distillation facilities will increase operating profit
- Cash positive operations for hemp/cannabis business by first half of 2024, including corporate overhead

^{1.} Grandview Research; <a href="https://www.grandviewresearch.com/industry-analysis/us-tobacco-market#:":text=The%20U.S.%20tobacco%20market%20size%20was%20estimated%20at%20USD%2075.9,USD%2078.3%20billion%20in%202022.

^{2.} Foundation for a Smoke Free World; https://www.smokefreeworld.org/wp-content/uploads/2021/12/Global%20Trends%20in%20Nicotine%20Report%20December%202021.pdf

FDA Authorized VLN®

Cannabinoid Ingredients,

APIs and CDMO

Corporate/Financial





12 MONTHS OF VLN®: FROM FIRST SALES TO MAJOR MULTI-STATE LAUNCH

VLN® announced its first sales April 13, 2022 as part of a Chicago pilot program

Exceptional early sales and consumer interest exceeded all industry expectations

New tobacco team has upgraded VLN's launch plans since December 2022 to best take advantage of consumer and retail interest

Now moving into full commercialization as a mainstream disruptor with clear path to cash positive in 2H 2024



VLN allows consumers to literally stare smoke in the face and say, "I don't need you."

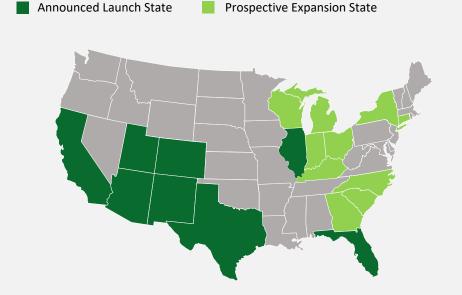


NEW VLN® LAUNCH IN TOP CA, TX AND FL MARKETS

2023 VLN® Expansion Now Underway, Retail Chains Booking Launches Throughout the Year

8 States Announced; Targeting VLN® Sales in up to 18 States by End of 2023

Example VLN® Distribution: MRTP States + Adjacent States



Source: CDC; Current Cigarette Use Among Adults (Behavior Risk Factor Surveillance System) 2019; World Population Review Cigarette Prices by State; Internal Documents

Rapidly Accelerating Commercial Rollout

- Secured #1, #2 national scale c-store distributors; In process with #3, #4, regionals
- Launching with #1 c-store chain in
 CA, TX, FL; #2 C-store chain on board in IL, CO
- Adding new national and regional c-store chains in key states
- Scaling initial 500 stores in 2 stateswith 4,000+ stores in 3+ new states
- More than 100 chains in pipeline interested in VLN®, plus additional distribution

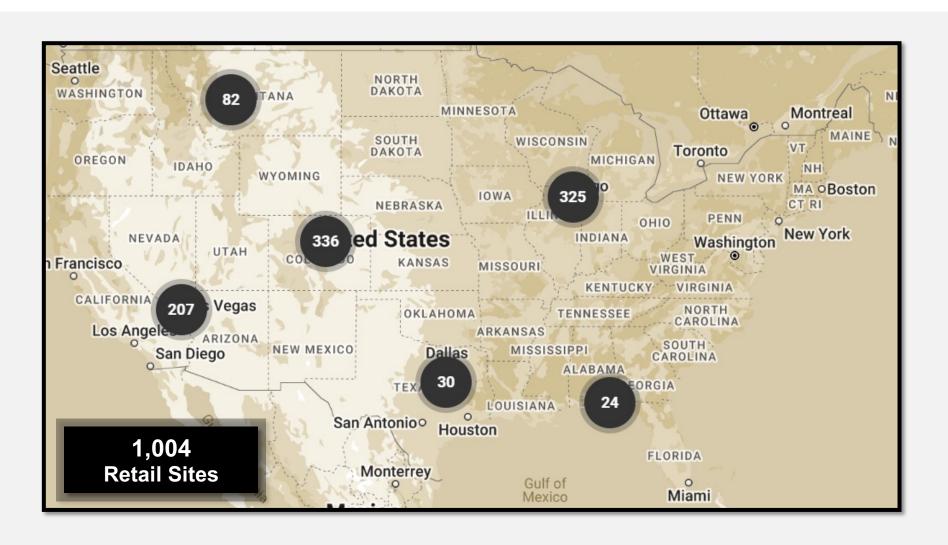
18 Targeted Markets, 56% of Total U.S. Cigarette Sales

State	% of Adult Smokers	Pack Volume	Retail Sales		
AZ	15%	160M	\$1.4B		
CA	10%	514M	\$4.9B		
CO*	14%	130M	\$1.0B	An	
FL	15%	513M	\$3.9B	Announced	
IL	15%	253M	\$2.6B	m	
NM*	16%	48M	\$0.4B	ed	
TX	15%	736M	\$5.6B		
UT*	8%	45M	\$0.4B		P
Total		2,397M	\$20.2B		Priority States
WI	15%	184M	\$1.6B		y Si
CT*	12%	65M	\$0.8B		tate
GA	16%	398M	\$2.5B		S
IN	19%	328M	\$2.3B		
KY*	24%	295M	\$2.0B		
MI*	19%	351M	\$2.9B		
NC*	19%	500M	\$3.3B		
NY	13%	180M	\$2.2B		
ОН	21%	467M	\$3.7B		
SC	18%	215M	\$1.5B		
Total		6,159M	\$43.0B		
*State with MRT	D Tay Ronofit		·		

^{*}State with MRTP Tax Benefit



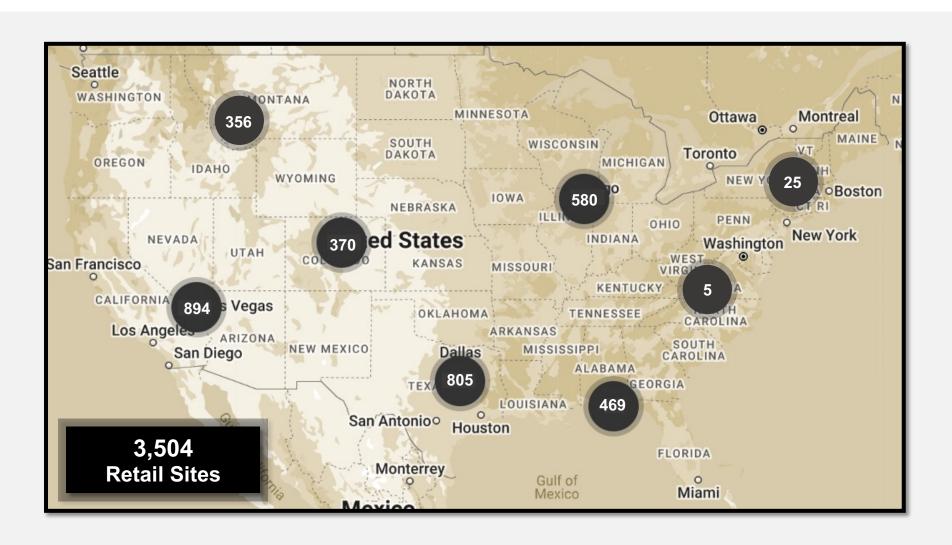
Retail Availability as of Early June 2023



- Secured #1, #2 national scale cstore distributors in Spring 2023
- Early expansion with new national and regional c-store chains in key states leveraging distribution arrangements to support rapid rollouts to dozens and hundreds of stores
- Readying for launch in 3 new states
- More than 100 chains in pipeline interested in VLN®, plus additional distribution



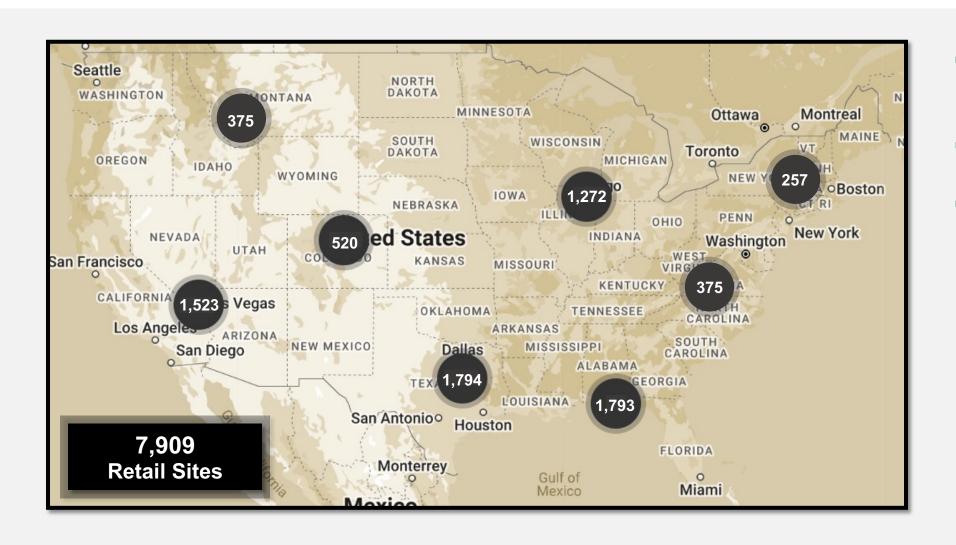
Addition of #1 C-Store, Franchisees, Other Notable Retail Chains in Funnel as of Early June 2023



- Adding #1, c-store in CA, TX and FL in July 2023
- Corporate confirmed to roll out all stores, franchisees joining in launch
- Adding chains to increase density in key geographies
- Create wider availability of VLN® across multiple retail chains



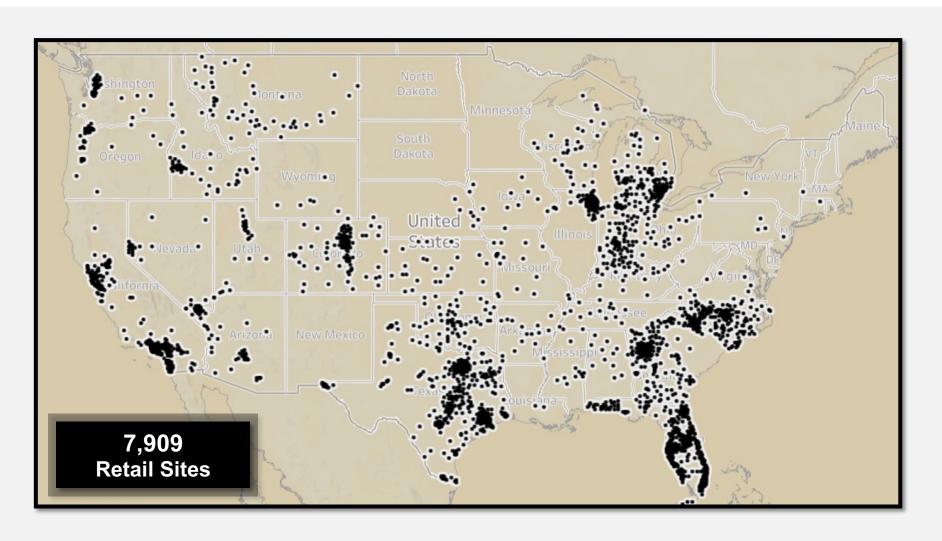
Continued Expansion with Additional Chains Plus Drug Store and Big Box or Grocery



- Momentum drives continued expansion with additional stores, states and chains
- Tracking to goal of 18+ total states
- Generating broad availability of VLN® to capture market share across high-volume markets



Increasingly Dense Coverage in Key Markets and Population Centers = Clear Path to Cash Positive in 2024



- Broad availability provides extensive U.S. coverage
- Well exceeded goal of 18+ total states
- VLN® can be added at any retail chain with high confidence
- Market scale and scope sized to drive to cash positive operations in 2024



VLN® LAUNCHING NEW CAMPAIGN SPECIFICALLY DESIGNED TO EVOKE TRIAL AND REPEAT PURCHASE

VLN Has Real Competitive Advantages that Support Commercial Success

Our recent research produced two very important findings that VLN, and **NOT** other reduction/cessation products, can take advantage of:

- 1 Smokers are addicted to the act of smoking, not just nicotine
- Current cessation messaging and products are perceived negatively and make smokers feel less confident and competent, potentially discouraging reduction and cessation

Our recent research showed that **VLN was the preferred method for smoking reduction** because it doesn't force smokers to quit the behavior "cold turkey."

Our new campaign is designed to establish this VLN Advantage:

- Reinforce the fact that they don't have to quit "cold turkey"
- Inspire confidence and competence

Optimistically encourage them to try VLN

4 Entice them to learn more about VLN and how it can help them





CAMPAIGN SUPPORTED THROUGH TARGETED PAID MEDIA

Hyper-Targeted Media Blitzes in Rollout Markets Will Reach Prospects through Multiple Digital Touchpoints Generating Top-of-Mind Awareness, VLN Advantage Education and Retail Foot Traffic

Advanced targeting techniques ensure most efficient programs are in market, strong penetration against key target segments and high message frequency for brand name recognition

- Program will run on content that has an age composition of at least 85% age 21+
- Combination of online video, large-format display banners and dynamic native ads engage prospects, reinforce brand's value proposition and increase product credibility
- Dollars focused within priority zip-codes based on high concentration of adult consumers and retailers

Campaign success will be measured by a third-party pre/post brand awareness study and retail foot traffic measurements to allow for real-time media optimizations





ONGOING ACTIVITY DELIVERS CONTINUOUS ENGAGEMENT

Integrated Efforts Will Keep VLN in Front of Consumers and Business Partners with a Consistent Message to Grow the Brand



Brand Website

Revamped website will deliver education, user testimonials, smoking reduction support tools and consistently updated articles to attract consumers and fuel organic search.



Brand Community

Interested consumers will receive ongoing communication with news, information and offers to help keep them on their reduction journey with VLN



Enhanced PR Efforts

Local market advocates are being engaged to speak out in support of VLN's mission and product. Proactive media relations underway to create incremental market level paid and earned media opportunities.



Influencer

Currently exploring macro and micro influencers to have a consistent stream of voices helping to educate and establish brand trust.



THE PROOF IS IN THE PINNACLE (LAUNCH)

Rapid Rollout across 22 States Confirms Scalability for VLN® Distribution

Pinnacle is a conventional, premium, store brand cigarette for current adult smokers

Sold at a top 5 retail C-store chain, 1,700+ locations across 22 states

Leverages national scale distributor also being used for VLN® distribution and stocking

Initial sales demonstrated strong share gains on compelling value proposition and consistent availability, even ahead of in-store promotion

Demonstrates how XXII's new distribution can launch VLN® into thousands of key c-store locations within weeks





INTERNATIONAL ADVANCEMENT

Moving ahead with product sales in Switzerland, Japan, South Korea

Advancing pilot programs for additional markets in 2023, including expected:

- Switzerland (pilot test) product shipped for distribution
- Japan (pilot test) product readying for shipment to distributor ahead of test sales commencing in June 2023
- South Korea (updated product) updated packaging being designed in response to initial market tests, product expected to be shipped to the distributor in Summer 2023 for additional market testing





IMPROVING MIX TO ENHANCE CAPACITY AND MARGIN

Prioritizing Higher Margin CMO and VLN® Production to Support Increasing Demand

Shifting product mix at NASCO to improve operating results

Rotating out of lower margin filtered cigar volumes to free capacity for higher margin premium cigarettes

Specialty CMO products like Spectrum provide superior margin and more predictable demand patterns

VLN® provides premium margin opportunities and will require greater share of capacity as warehouse stocking and retail sales expand throughout 2023





VLN® CAN BE THE FOUNDATION FOR HARM REDUCTION POLICIES IN THE U.S. AND ABROAD

The science shows a **menthol ban** absent an off-ramp primarily transitions menthol smokers to traditional cigarettes, while a **reduced nicotine mandate** would help all smokers more easily quit smoking or migrate to less toxic products

FDA continues to advance its scientifically based **menthol ban** and **reduced nicotine content policies,** plus state and local governments are taking direct action

VLN® Menthol King cigarettes could be the **only** current combustible menthol cigarette potentially **exempt** from the menthol ban.

New Zealand's reduced nicotine mandate takes effect in ~2 years – requires all cigarettes to be 0.8mg/g or less, including test variance

Seed development program scaled to supply tobacco to the entire New Zealand market – more than 2 billion cigarettes in total



VLN® PATH TO CASH POSITIVE 2024

Customers and Retailers WANT to Access VLN®

Expanded Major Distribution

- Agreements with #1, #2 U.S. c-store distributors accelerates launching thousands of stores across multiple states
- Provides access to stores within days or weeks after retailer agrees to carry VLN® or conventional products
- Adding international activity in South Korea, Japan, Switzerland

New Consumer Campaign

- Designed to inspire confidence, competence and optimism, VLN® provides a new path for smokers to take control and succeed in their reduction goals
- Activating influencers to create a consistent stream of voices supporting smokers' decisions to reduce their habit

Onboarding Top Retail Partners

- Starting from ~500 stores across 2 core states
- Adding Pinnacle to ~1,700 stores in 20+ states during April and May
- Adding 4,000+ VLN® stores in CA, TX and FL, now underway
- Adding regional stores, expanding Smoker Friendly
- Pipeline of 100+ national and regional chains, scheduling launches throughout 2023

Optimizing Operations

- Transitioning capacity away from low margin filtered cigar business
- Scaling higher margin VLN and premium CMO products to meet increased store count and distributor stocking needs
- Upfront investment in sales team driving rapid market penetration and supports new CDMO+D license and distribution agreements

Expanded
availability and
supportive voices
drive trial, repeat
purchase and
market share,
leading to cash
positive operations
in 2024

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DELIVERING 2023's HIGH GROWTH PROMISE

Ramping Ingredient Volumes, New License and Distribution Agreements, New Facilities



22nd Century's GVB Biopharma ("GVB") is transforming the manufacturing and distribution of hemp-derived active ingredients and finished goods in the consumer products, nutraceutical and pharmaceutical industries

Dominant North American position plus broad global footprint in geographic markets targeted for growth

- Record ingredient sales quarter after quarter
- New CDMO+D model expands revenue and adds value to customers
- New extraction unit, production facilities and plant biotechnology by 22nd Century will lead to margin expansion
- Contract farming increases biomass availability and stabilizes costs
- On track to achieve cash positive operations in first half 2024, including corporate allocation

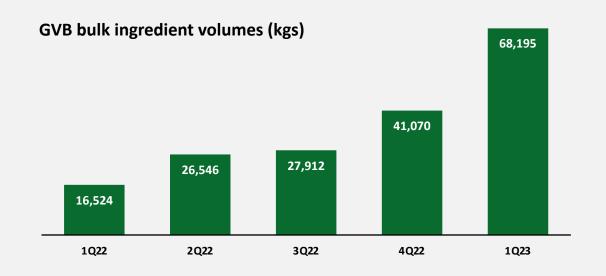


DRIVING RECORD INGREDIENT SALES VOLUMES

Growing Volumes Sets Stage For Return To Internal Production, Margin Recovery

 GVB bulk ingredient volumes rising rapidly based on reputation as reliable supplier of consistent, quality extracts

New campus expected to target capacity for 10 million lbs. hemp biomass and 600,000 kg of extracts annually, 100,000 kg dedicated top pharma grade







TRANSFORMATIVE NEW CDMO+D MODEL

First Two Agreements Signed With Estimated \$140 Million Cumulative Sales Value Over Three-year Terms

Working with the largest and best-known consumer CBD brands

- Initial agreements with brand leaders like Cookies, Old Pal, and others in process
- License covers broad range of hemp derived cannabinoid consumer packaged goods at each brand

New, single-source model provides complete solution

- Ingredient Supply
- White-label manufacturing
- Retail category management and distribution

Enhances GVB revenue and margin opportunities with distribution services

 VLN® sales team and channel to place products with retailers seeking innovative, high velocity, high margin, small footprint consumer CBD products



GVB POSITIONED FOR GLOBAL LEADERSHIP

Industry Leading Certifications Position GVB as the Supplier of Choice

FDA's Commitment to Advance Regulatory Standards and Product Recommendations on CBD Use in Consumer and Nutraceutical Products will Further Expand the Market

Prineville, Oregon: World-scale crude extraction over 15,000 kg/month at full capacity (operational Q1 2023); New ingredient and production and refinement facility with increased capacity and greater efficiency

Las Vegas, Nevada: 40,000 sq. ft. CDMO facility used for Private Label/Contract Manufacturing

United Kingdom: RXP acquisition creates leadership position in novel foods applications market

European Union: Netherlands Distribution provides increased availability to higher margin customers

Filed FDA DMF to provide **pharmaceutical grade API** differentiating GVB distillates and isolates

















HEMP/CANNABIS PATH TO CASH POSITIVE 2024

Rapid scale plus operating enhancements create clear path to profitability

Operating Performance Enhancement

- Resume in-house distillate and isolate production
- New CBD crude extraction and biomass cultivation to drive incremental margin
- Scale revenue and increase gross margin across fixed cost base

Scale CDMO+D Business Volumes

- New white label plus distribution agreements establish new business model in industry
- Deep vertical integration drives further margin opportunity
- Robust pipeline of follow-on peer contract opportunities

FDA Drug Master File

- Growing number of CBD pharmaceutical trial activities represents new, high-value addressable market
- Completed FDA DMF filing to access pharmaceutical grade market currently dominated by high-cost synthetic products

Food & Nutraceuticals Market Expansion

- New FDA guidelines will establish enhanced regulatory standards and validate the market
- Extensive certification and standardization capabilities distinguish GVB from smaller producers

Continued revenue growth plus improving margin and operating performance will drive hemp/cannabis to cash positive operations in 2024

FDA Authorized VLN®

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FIRST QUARTER 2023 FINANCIAL HIGHLIGHTS

	Net Revenues	Gross Profit ¹	Gross Margin ¹	Operating Loss	Adjusted EBITDA ²
1Q 2023	\$22.0M	\$(1.2)M	(5.4)%	\$(17.8)M	\$(14.7)M
1Q 2022	\$9.0M	\$309K	3.4%	\$(8.1)M	\$(6.6)M
	+144% YoY increase in Net Revenues primarily due to GVB acquisition.				

Introducing 2023 full year revenue outlook for net revenues of \$105 million to \$110 million:

- Net revenues expected to scale steadily through 2023 driven by increased VLN® sales, growing GVB bulk ingredient revenue and new CDMO+D license agreements
- Gross profit projected to improve significantly in Q2 2023 and going forward reflecting
 - higher product mix in tobacco and
 - return of production capabilities, farming program and new CDMO+D contracts for hemp/cannabis
- 22nd Century on pace to achieve cash positive business unit operations in 2024

^{1.} Gross profit margin is calculated by dividing gross profit by net revenues.

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TOBACCO REVENUE & PROFIT BREAKDOWN

	Tobacco		
	1Q 2023	1Q 2022	
Unit sales ¹	1.0M	1.4M	
Net revenue	\$8.9M	\$9.0M	
Gross profit	\$18K	\$309K	
Gross profit margin ²	0.2%	3.4%	

- Net revenues decreased slightly QoQ reflecting a planned reallocation in production resources at the Company's NASCO facilities away from lower margin filtered cigars to higher margin VLN® and conventional cigarette products
- Gross profit declines QoQ reflecting the transition.

Opportunity in 2023 for additional tobacco net revenue growth and margin expansion:

- New Pinnacle launch scaling rapidly, creating new sales volumes
- Increased sales volume of higher margin
 CMO cigarette products in place of lower margin filtered cigar volumes
- Accelerated VLN® launch driving increased revenue and margin contribution from premium VLN® products

^{1.} Tobacco unit sales volume is measure in cartons

^{2.} Gross profit margin is calculated by dividing gross profit by net revenues

Contract manufacturing operations (CMO)



HEMP/CANNABIS REVENUE & PROFIT BREAKDOWN

	Hemp/Cannabis		
	1Q 2023	1Q 2022 ²	
Unit sales ¹	68,195	16,524	
Net revenue	\$13.0M	\$7.0M	
Gross profit	\$(1.2M)	\$1.0M	

Net revenue growth QoQ primarily driven by:

- Addition of acquired GVB revenue contribution
- Significant GVB organic revenue volume growth QoQ
- 1Q net revenue increased despite 4Q Grass Valley fire
- Strong consumer demand for GVB bulk ingredients and new CDMO opportunities

Additional 2023 hemp/cannabis opportunity driven by:

- Organic growth reflecting continued strong customer demand for ingredient volumes and manufacturing support
- Contracted farming to produce internally-sponsored biomass at lower cost
- New CDMO+D license agreements beginning initial distribution activities
- Profit margin expansion reflecting full restoration of GVB extraction capabilities and vertical integration with new Prineville crude extraction facility becoming fully operational

^{1.} Hemp/cannabis unit sales volume is measured as kilograms.

GVB acquisition occurred on May 13, 2022. All prior period results are provided for illustrative purposes only. These pro forma results do not purport to be indicative of the results that would have been obtained, or to be a projection of results that may be obtained in the futures. Refer to our Annual Report on Form 10-K Note 2 of the Consolidated Financial Statements for description of pro forma adjustments as required under U.S. GAAP.



SUMMARY BALANCE SHEET ITEMS

	Balance sheet date as of:		
(in millions)	Q1 2023	Year End 2022	
Cash and cash equivalents ¹	\$23.7	\$21.2	
Total assets	\$124.1	\$114.7	
Total liabilities	\$42.7	\$18.7	
Total shareholders' equity	\$81.4	\$96.0	

^{1.} Cash, cash equivalents, short-term investment securities and restricted cash.

New \$21.1M Credit Facility strengthens balance sheet and provides working capital to fund strong growth for both VLN and hemp/cannabis business

Collected \$5M of casualty loss insurance proceeds from the Grass Valley fire during Q1 23. Anticipated additional business interruption insurance proceeds estimated at approximately \$8 million beginning in Q2 23.

Strengthened balance sheet supports growing working capital needs driven by increased VLN® product shipments to multiple national-scale distribution partners as well as strong customer demand for hemp/cannabis bulk ingredients.



2023: REVENUE GUIDANCE \$105 - \$110 MILLION

Growth Across Both VLN® and Hemp/Cannabis Franchises Tracks to 2024 Cash Positive Operations





Leveraging exceptional VLN® demand into aggressive multi-state commercial launch program

- Launching national scale distribution to support demand from largest C-Store, consumer, and pharmacy chains
- Selling VLN® in up to 18 states in 2023

Increased volumes and new market opportunities drive hemp/cannabis growth and margin

- Scaling ingredient and CDMO business in U.S. and Europe; launched CDMO+D model
- Submitted Drug Master File to FDA to produce and supply APIs for new medical and pharmaceutical industry

Confirmed path to cash positive in both tobacco and hemp/cannabis

- Executing clearly delineated revenue growth strategies in both business units
- Advancing to positive cash flow from hemp/cannabis and VLN® business units in 2024, including corporate overhead

Questions & Answers

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