Company Name: Piedmont Lithium
Company Ticker: PLL US
Date: 2023-11-07
Event Description: Q3 2023 Earnings Call

Market Cap: 533.4339387931824
Current PX: 27.770000457763672
YTD Change($): -15.05
YTD Change(%): -35.147

Bloomberg Estimates - EPS
Current Quarter: 3.098
Current Year: 3.62
Bloomberg Estimates - Sales
Current Quarter: 92.675
Current Year: 148.32500000000002

Q3 2023 Earnings Call

Company Participants

- Erin Sanders, Senior Vice President, Corporate Communications & Investor Relations
- Keith D. Phillips, President and Chief Executive Officer
- Michael D. White, Executive Vice President and Chief Financial Officer
- Patrick H. Brindle, Executive Vice President & Chief Operating Officer

Other Participants

- David Deckelbaum
- Joseph Reagor
- Matt Summerville
- Austin Yoon
- Greg Lewis
- Matt Key
- Eric Boyes
- Chris Kapsch
- Noel Parks

Presentation

Operator

Ladies and gentlemen, thank you for standing by. My name is Abby, and I will be your conference call operator today. At this time, I would like to welcome everyone to Piedmont Lithium's Third Quarter 2023 Earnings Call.

Today's call is being recorded and all lines have been placed on mute to prevent any background noise. After the speakers' remarks, there will be a question-and-answer session. (Operator Instructions) Thank you.

And I will now turn the call over to Erin Sanders, Senior Vice President of Corporate Communications and Investor Relations. You may begin.

Erin Sanders, Senior Vice President, Corporate Communications & Investor Relations

Thank you, operator, and good morning everyone. Welcome to Piedmont Lithium's third quarter 2023 earnings call.

Joining us today from Piedmont Lithium are Keith Phillips, President and Chief Executive Officer, who will provide the introductory remarks; Michael White, Chief Financial Officer will then review our financial results; followed by Patrick Brindle, Chief Operating Officer, who will offer an update on our project. Keith will then provide closing commentary before we transition to a live Q&A session.

As a reminder, today's discussion will contain forward-looking statements relating to future events and expectations that are subject to various assumptions and caveats. Factors that may cause the company's actual results to differ materially from these statements are included in today's presentation, earnings release, and in our SEC filings.

In addition, we have included non-GAAP financial measures in this presentation. Reconciliations to the most directly comparable GAAP financial measures can be found in today's earnings release and the appendix to today's slide presentation.

Please note that references to shipments are lithium concentrate and metric tons are dry metric tons. Copies of our earnings release and presentation will be available on our website at piedmontlithium.com.

With that, I'll turn the call over to Keith Phillips. Keith?

Keith D. Phillips, President and Chief Executive Officer

Thanks, Erin, and thank you all for joining us today for Piedmont Lithium's very first earnings call that Q3 2023 has been transformational for Piedmont on many levels.

First and foremost, seven years since our founding, we have transitioned from an explorer to a developer to become a lithium supplier and generated our first revenue, huge milestones. I'll note that this is our first earnings call. We will take a little time throughout the discussion to provide some background for those who are newer to the Piedmont story.

Some of the areas we'll cover today, most importantly production is ramping up at North American Lithium, our joint venture operation in Quebec. We made our first two shipments of spodumene concentrate in the third quarter. We achieved strong gross margins and positive earnings per share despite a difficult lithium pricing environment. We have an exciting development pipeline and a strong balance sheet and as we think about future growth, I'll spend some time at the end of our remarks discussing our disciplined approach to funding, along with our outlook on lithium markets.

To that point, I thought it would be helpful if I started with a quick overview of Piedmont Lithium, our mission and strategy. Piedmont is one of only three U.S. domiciled lithium companies and our mission is to be a leading supplier of lithium resources for the U.S. EV supply chain, supporting U.S. efforts to reduce our reliance upon foreign nations for critical materials and strengthening our national energy security.

Underpinning Piedmont's mission is a strategy to focus on hard rock production by processing spodumene concentrate from assets we own or in which we have an economic interest. We believe the execution risk in spodumene concentrate is far lower than for some of the more exotic resources or chemical flow sheets that others in the industry are pursuing.

We have been fortunate that the first two of our spodumene development projects have relatively low CapEx and potentially high returns on invested capital. North American Lithium, because it's a Brownfield project Ewoyaa in Ghana, because it is a simple DMS only flow sheet. We ultimately aim to convert our spodumene concentrate production into lithium hydroxide for the U.S. market with planned projects in Tennessee and North Carolina. We believe American consumers will continue to prefer larger vehicles, SUVs, and trucks, and they want to continue to drive long distances, all leading to a requirement for more lithium hydroxide production in the U.S.

Over the last several years, we have strategically assembled a global portfolio of four capital projects to build an integrated business. Our joint venture investments in Quebec and Ghana provide low CapEx upstream resources, and our plan projects in Tennessee and North Carolina are aimed at providing downstream and integrated operations. Through the development of this portfolio, we expect to one day produce an estimated 60,000 metric tons per year of lithium hydroxide that is compliant with the Inflation Reduction Act.

To put that in perspective, there is only about 20,000 tons per year of lithium hydroxide produced in the U.S. today.

But first and foremost, we're focused on our hard rock spodumene strategy and revenue generation, which centers on our control of resources that ultimately will produce about 525,000 metric tons per year of spodumene concentrate. Patrick will talk more about our projects in a little bit.

With that backdrop, let's segue to highlights of our third quarter.

Our key news, of course, is that we made two customer shipments this quarter from NAL, our JV operation in Quebec, with operating partner, Sayona Mining. NAL began production in March of this year, joining a fairly exclusive group. By our count, there are only about 10 significant spodumene producing companies in the world today, based principally in Western Australia. NAL is the largest operation in North America and obviously is very well-positioned strategically. We own approximately 12% of Sayona Mining and 25% of Sayona Quebec, the joint venture we formed with Sayona in 2021 that includes North American Lithium.

We are not only an investor in the NAL operation, we are also its largest customer. Our optic agreement with Sayona Quebec provides us with a greater of 50% of production or 113,000 metric tons per year, again, whichever is higher, of spodumene concentrate at market prices with a floor price of $500 a ton and a ceiling price of $900 a ton for the life of the mine. In some ways, the agreement is analogous to a metals royalty or stream.

So, with respect to our Quebec partnership, we benefit in two ways. We recognize revenue and cost of sales through our offtake agreement, and we separately record our 25% share of the JV's profit or loss as an equity method investment. In Q3, we generated a revenue of $47.1 million through our offtake agreement and income through our equity investment, resulting in an adjusted net income of $17 million and adjusted earnings per share of $0.88.

While we are pleased, Piedmont is now making physical deliveries of lithium concentrate and achieving positive earnings. Our results were materially impacted by the roughly 40% decline in spot lithium prices during the quarter. The majority of our offtake tonnage will ultimately be sold under long-term contracts announced earlier this year, but our initial shipments are being made on the spot market. And contract pricing traditionally occurs on a lag basis. So, if you ship in September, you price the shipment based on the pricing in the months leading up to the shipment date, depending on what the party has negotiated.

In the spot markets, shipments are increasingly priced on a look-forward basis with the final pricing based on market parameters at or around the time of delivery rather than shipment.

Spodumene concentrate prices fell from over $3,500 a ton in early July to approximately $1,900 today, directly impacting our quarterly results as our spot shipments are priced out around the time of the customer receipt.

In other words, we've had to bear the full brunt of falling prices in Q3, largely due to timing, but Michael will provide more details on the financials in his presentation in a moment.

As we've been growing our business, we've been able to build a stellar team of experienced professionals to support our mission. From mining and process engineers to safety, environment and health experts and the legal, financial and other professionals needed to support our growing business, we've increased our team by more than 50% to 65 employees this year. And we're developing a culture of success, safety and commitment to sustainability.

In fact, we issued our inaugural sustainability report in June of this year, which governs our ESG efforts as we develop our operations and advance our equity interests.

With that, let me turn it over to Michael to discuss our third quarter financials and fourth quarter outlook.

Michael D. White, Executive Vice President and Chief Financial Officer

Thanks, Keith. Good morning, everyone. Let's begin with our third quarter highlights on the next slide.

Revenue was $47 on sales volume of 29,011 metric tons as we made two customer shipments associated with Piedmont's offtake agreement with NAL. Our realized price and realized cost of sales on a per metric ton basis were $1,624 and $805 respectively. Gross profit was $24 million, reflecting a gross profit margin of 50%.

Third quarter GAAP net income was $23 million or $1.19 per share. Adjustments this quarter included $0.41 related to gain on dilution of our equity method investments and $0.10 related to tax adjustments and, to a much lesser extent, other costs.

Including these adjustments, we reported third quarter adjusted net income of $0.88 per share. Operating costs were $12 million and included $3 million of non-cash expenses. Adjusted EBITDA was $16 million, reflecting an adjusted EBITDA margin of 34%.

Let's move to sources and uses of cash. We ended the quarter with $95 million of cash on hand, up from $89 million at the end of the second quarter. We generated $25 million in cash from operations as we collected cash from our first sale. As part of a disciplined capital allocation approach, capital expenditures were $16 million and $45 million for the quarter and year-to- date, respectively, and relate mainly to our Tennessee Lithium and Carolina Lithium projects.

We invested $2 million and $35 million during the quarter and year-to-date, respectively, in our equity investments, which include Sayona Mining, Sayona Quebec, and Atlantic Lithium, as well as in cash advances for the Ewoyaa project in Ghana.

This brings us to our fourth quarter outlook on the next slide.

In the fourth quarter, we expect to purchase and ship approximately 27,500 metric tons from our agreed-upon offtake allocation from NAL. This puts us on track to deliver full year volume guidance of approximately 56,500 metric tons. Capital expenditures are expected to be in the range of $18 million to $22 million, primarily for capitalized engineering costs and land purchases for our lithium conversion facilities and landfill for Tennessee Lithium, which Patrick will further discuss. Investments in and advances to affiliates are expected to be between $10 million to $14 million.

Turning briefly to the Quebec structure on the following slide, we thought it would be helpful to provide additional clarity regarding our ownership interests in Sayona Quebec and Sayona Mining and our offtake agreement rights from North American Lithium.

Keith previously discussed our offtake rights and I covered our expected 2023 allocation of approximately 56,500 metric tons. There are two key points of emphasis I'd like to make on this slide.

First, revenue and cost of sales, as reported by Piedmont, reflect only those shipments made by Piedmont to its direct customers and purchases made by Piedmont from NAL.

Second, Piedmont does not consolidate the financial results of Sayona Quebec or Sayona Mining. Piedmont reports its share of income or loss from its affiliates on a one-quarter lag. As such, our third quarter 2023 results include our share of the second quarter 2023 results from Sayona Quebec and Sayona Mining. Sayona Quebec made three joint venture shipments totaling 48,211 metric tons during the three months ended September 30, 2023.

However, Piedmont will report its share of the financial results of these three shipments as part of its fourth quarter 2023 results.

Now, turning to Patrick.

Patrick H. Brindle, Executive Vice President & Chief Operating Officer

Thanks, Michael. We can now turn to an operational update and a discussion on the projects in our global portfolio, including our now producing North American lithium mine in Quebec.

Our growth plan is to become a leading North American producer of lithium hydroxide within the 2020s. Fundamentally, we aspire to be a fully integrated lithium chemicals producer using spodumene concentrate from mines that we own and operate or in which we have a significant equity interest. We've completed the first stage of our plan with a successful restart of the North American lithium mine in Quebec, Canada in March of this year, and we continued to support our joint venture in the ramp up of the NAL operations.

NAL shipped 48,211 tons during the period, including just over 29,000 tons shipped to Piedmont Lithium under our offtake agreement. NAL produced 31,486 tons of concentrate during Q3 to 6% quarter-on-quarter increase as the ramp up at NAL continues. Through the end of Q3, NAL produced 64,000 dmt of lithium concentrate on a year-to-date basis.

Utilization at the NAL concentrator reached an average of 72% during the quarter and global lithium recovery was 58%. NAL is targeting between 140,000 to 160,000 dry metric tons of concentrate production during the period from July 2023 to June 2024, and this target assumes the NAL process plant reaches full production levels by mid-spring 2024.

A number of capital projects are also being advanced at NAL to increase plant availability and process efficiency. A capacity increase is in progress for the tailing storage facility. This work should be completed by the end of 2023. A new crushed-ore dome is currently under construction with expected completion in spring 2024. Completion of the dome will be fundamental to achieving full run rate production throughput at NAL. The crushed-ore dome should allow for improved overall availability in the operation and allow management to achieve their target mill availability of greater than 90%. Much of the NAL concentrator is vintage 2010 control technology which dates to the original construction of the mine. The site team is currently working to upgrade a number of these control systems.

I'd like to take this opportunity to commend the efforts of the management team at NAL and their ongoing efforts to bring NAL back into production as scheduled and the results that have been achieved to-date.

Shifting now to exploration activities we are very encouraged by recent drill results at NAL. The 2023 drill campaign thus far has returned some exceptional drill results in the northwest direction of the current pit shell including several thick high-grade pegmatites discovered at depth.

Lastly, we continue to evaluate the potential for completion of the lithium carbonate plant at NAL with our partner, Sayona Mining.

Now I would like to move the presentation forward to Ghana and activities at Atlantic Lithium. I should briefly note that I became a member of the Atlantic Lithium Board of Directors in June of this year. Atlantic Lithium's flagship project, Ewoyaa, is located in the Cape Coast region of the country, approximately 70 miles from the port of Takoradi, which provides accessible, low-cost logistics for transporting lithium concentrate to the United States.

Ewoyaa is a relatively low CapEx and low OpEx project with estimated annual reserves-based production target of 340,000 tons per year of spodumene concentrate. We hold offtake rights for 50% of the annual production from the mine on at-market-based prices for a life of mine, which we plan to utilize as feedstock for our Tennessee Lithium project. We've recently achieved, together with our partners, several important milestones.

In August, we exercised our option to acquire our initial 22.5% interest in Atlantic Lithium Ghana. In September of this year, the Minerals Income Investment Fund of Ghana, or MIIF, agreed to acquire a 6% interest in Ewoyaa for $27.9 million.

In October, Ghana's Ministry of Lands and Natural Resources granted Ghana's very first lithium mining lease to the Ewoyaa project. The issuance of the mining lease represents a major milestone in the advancement of Ewoyaa. This lease grants Atlantic Lithium the exclusive rights to carry out mining and commercial production activities over the application area for an initial 15-year term and is subject to parliamentary ratification and to the securing of the remaining environmental permits for the project.

Under the terms of the mining lease, the government of Ghana will be entitled to a 13% free carried interest in Ewoyaa and a 10% royalty rate. These terms combined with MIIF's 6% equity stake results in a project level earning interest of 40.5% each for Piedmont and Atlantic Lithium, but this does not impact our offtake right to 50% of annual production.

Atlantic Lithium expects the Ewoyaa permitting and approvals process to be finalized in the second half of 2024 with first production expected in the second half of 2025 from our modular DMS plant and full commercial production to begin in 2026.

Moving back to the United States. In Tennessee, we are designing the world class lithium hydroxide conversion facility, the Tennessee lithium project, which we believe will play a key role in increasing the domestic production capacity for battery grade lithium products. At steady state operations we expect to produce 30,000 tons per year of battery quality lithium hydroxide. We now hold all the material permits that we need to begin construction at Tennessee Lithium and we've exercised our option to purchase the project site.

Also, we've entered into purchase agreements for an adjacent foundry and an associated landfill. The landfill is expected to provide long-term disposal capacity for the operation's inert tailings if we cannot find a commercial outlet for this material. A foundry, idled earlier in 2023, gives us the opportunity to potentially reduce capital costs through Tennessee Lithium through substantial reuse of existing infrastructure. Due to these acquisitions, we now plan to undertake a strategic review of the Tennessee Lithium project, which we expect will take several months.

In North Carolina, we continue to advance plans for our foundational asset, the Carolina Lithium Project. Our goal in North Carolina is to establish a fully integrated mining, spodumene concentration, and lithium chemicals manufacturing campus that will be designed to produce 30,000 tons per year of lithium hydroxide at steady state operations.

Our principal focus at this time continues to be working towards approval of our state mining permit application, which we submitted to the North Carolina Department of Environmental Quality's Division of Energy, Mineral and Land Resources, or DEMLR, in August 2021. We continue to work on our response to ADI number three received from DEMLR earlier this year, and our response may require us to submit an extension request in order to finalize the containment plans for our waste rock stockpile.

Looking forward, as we prepare to enter the rezoning and local approval process, which would follow receipt of our state mining permit, we have expanded our engagement with government officials and community stakeholders. We remain optimistic about the Carolina Lithium Project and its ultimate value for shareholders and all stakeholders. And we're very pleased with the strong support we've received from many local, state, and national political figures for this project.

This concludes my remarks today, and at this point, I'll turn the conversation back over to Keith.

Keith D. Phillips, President and Chief Executive Officer

Thank you, Patrick. I'd like to conclude with some thoughts about the market and our funding strategy. To borrow a bit from Mark Twain, we believe reports of the lithium market's demise are greatly exaggerated.

Despite some of the gloom and doom out there, 2023 has actually been a strong year for the EV market and for lithium demand. EV sales are headed for another record year globally, China, record sales, Europe, record sales, U.S., record sales. And while U.S. sales are further behind China and Europe, they have crossed the 1 million mark for the first time and are on pace to record a 40% increase from 2022.

Bloomberg expects Tesla's Model Y to become the world's best-selling vehicle of any type this year. These are huge milestones for the industry. Nearly every EV manufacturer has begun deliveries of a mainstream electric vehicle. Consumers now have a variety of choices, which has supported the growth in volume.

You can see in the next chart on this bar chart, the size of batteries within the vehicles are also growing. People want that longer range, particularly in a market like the U.S., where customers prefer larger vehicles and regularly drive long distances.

This has led to a nearly 50% increase in gigawatt hours deployed, which includes a significant growth in energy storage systems, or ESS, now representing approximately 13% of total battery demand and growing rapidly. We remain very bullish based on this data, combined with our conversations with OEMs and cell providers.

And the EV revolution is really just getting started in the United States. We've led China and Europe for several years in this sector, and now we're scrambling to catch, but we're ready to take off over the past two years, more than $80 billion worth of battery manufacturing projects or expansions have been announced. $80 billion just in the U.S. alone. These projects would require nearly 40 times the amount of lithium hydroxide capacity currently in the U.S. to fill demand domestically and current plan capacity, including ours doesn't come anywhere near that mark.

There have been a few announcements in recent weeks about shifting development timelines, but we believe these are short term adjustments related to the current market dynamics and not the deterioration of long term strategies. And new investments continue to be announced just last week in North Carolina, Toyota announced it is doubling down on its EV battery manufacturing project here, adding another $8 billion to its investment.

Like most revolutions, the electrification and transportation would not follow a smooth path. Demand will have cycles and surges; supply will come on line in lumps, not straight lines. The supply the supply-demand tension may experience some temporary relief and then shift again.

Now, let's look at the supply story for a moment. On Slide 25, we borrow a chart from Canaccord Genuity's equity research team. I'll let you dig into the details on your own, but our industry has a history of delays and extended time frames, whether due to permitting or funding or development or ramp delays. It's safe to say that we expect many of the current development projects in the pipeline to come on stream later than currently planned, especially in an environment with capital cost inflation, higher interest rates, and now lower lithium prices.

Next, I'd like to touch on recent M&A activity in this sector. Most of this is occurring in Australia, so U.S. investors may not be as current on the topic. Albemarle, SQM, Hancock, Mineral Resources, these are industry leaders and leading Australia mining entrepreneurs. These are some of the most knowledgeable folks in the lithium business, and based on their recent M&A moves, they appear very bullish.

Just in the past six weeks, we've seen six different aggressive moves by Hancock and Mineral Resources all around consolidation in the spodumene sector. Surely these folks feel the environment for lithium producers, particularly in spodumene, is constructive for the foreseeable future.

Before we close, I want to touch on the important topic of funding. Specifically, how are we planning to fund our growth. Our strategy centers on maintaining financial strength while pursuing low cost capital. Priority one is to build a strong upstream business on a capital efficient basis. With NAL being a brownfield operation and Ewoyaa being DMS only, the total capital Piedmont will invest here will be very modest relative to the economic upside we see.

Downstream projects are different. They tend to require significantly more capital and have a higher level of execution risk. Our plans are to de-risk these projects for our shareholders by combining supportive U.S. government funding with the support of highly capable strategic partners.

Now, let me get a little more granular on Slide 27, our final slide for today's presentation. We start from a strong financial position with $95 million in cash and about $84 million in shares of Sayona and Atlantic Lithium. We also expect to generate substantial free cash flow through our NAL offtake agreement. Even at current prices, we're at around a 50% gross margin.

Our next development project is likely to be the Ewoyaa spodumene project in Ghana. The capital requirements for this project are modest and we've commenced discussion with various government entities to assist with the process. As an example, the DFC, the Development Finance Corporation in Washington, has recent experiences helping to fund critical minerals projects in Africa and we believe Ewoyaa is a poster child for that process. More to come on that in 2024.

For our larger projects, an important consideration is some of the provisions within the Inflation Reduction Act. The 45X Manufacturing Tax Credit in particular will be a game changer for projects producing domestic lithium resources like Tennessee and Carolina Lithium. Separately, via the bipartisan infrastructure law, we were fortunate to be selected for negotiation of a $141.7 million grant last year by the U.S. Department of Energy for our Tennessee Lithium project. However, as our detailed engineering plans have evolved and inflation across the capital equipment sector has grown, we've taken a fresh look at our funding plans for Tennessee and have decided to pivot away from the DOE grant to pursue an ATVM loan through the DOE's loan programs office.

If awarded, the ATVM loan would be expected to cover a significantly larger share of the capital required for the project, enhancing the opportunity for strategic parties to partner with Piedmont on the project. We are also currently in the midst of an ATVM loan application process for the Carolina Lithium project as well.

With respect to partnering, we're working with our financial advisors at J.P. Morgan on a strategic partnering process for Tennessee. It is early days, but as one might expect, there is robust strategic interest in a large, well-located lithium hydroxide project in the Southeastern USA. This process will take some time and we will be patient in pursuing the best arrangements for Piedmont and shareholders. Transactions could ultimately take many forms, joint ventures, prepaid offtake, equity investments, et cetera.

Before I conclude, I want to express my sincere gratitude to the entire team at Piedmont Lithium. We are a young company in an exciting sector and have recruited some exceptional people to our team. We've now announced our first quarter with revenue and positive earnings and it wouldn't have been possible without these great folks. Thank you all.

That concludes our presentation portion of the call. Thank you for your time and attention. We'll shift to Q&A.

Questions And Answers

Operator

(Question And Answer)

Operator

(Operator Instructions) We will pause for just a moment to compile the Q&A roster.

And we will take our first question from David Deckelbaum with TD Cowen. Your line is open.

David Deckelbaum

Good morning, Keith, and congrats on the first earnings call here. Thanks for the time.

Keith D. Phillips, President and Chief Executive Officer

Thank you, David.

David Deckelbaum

Yeah, sure. Sorry about that. Yeah, I was curious, if we could talk a little bit more about the funding and financing path. One, I guess -- do you have -- I know, you said that the process with your advisors is going to take some time. But do you have a target in mind for when you might have an application into the DOE and when you might be having an agreement with a financing partner or some sort of alternative?

And I guess, in context with that, are you looking at just project-specific financing around Tennessee Lithium are you looking for holistic financing with Tennessee and Carolina and the broader Piedmont portfolio?

Keith D. Phillips, President and Chief Executive Officer

Thanks, David. Good questions. We had submitted an ATVM loan application for Tennessee prior to the receipt of the grant. Ultimately, and at the time, you may remember, the CapEx was estimated to be $572 million. I think we updated that in the DFS to $809 million. There's been some continued inflation, so we expect the CapEx to be higher than that number. We don't know how much higher, but somewhat higher.

So, that's the pivot from the grant to the loan, where we've seen in some other situations people getting or expecting loans around 60% to 70% of the capital cost. So, that would be very helpful for us.

So, we're focused on Tennessee first. And it is permitted from a timing perspective, if we wanted to, we could probably break ground in the next few months. There is more engineering work to do, as Patrick said, to really understand the opportunities provided by the new Waupaca[ph] acquisition. There are some real CapEx synergies there that we want to develop. But fundamentally, we're not in a big hurry. We think, we're bullish on lithium prices. We don't think we're in a current environment where prices are so high we want to rush.

It's more important for us to do it right, to de-risk the deal, technically to de-risk the project from a financial perspective. I expect this process to take 9 to 12 months to bring together; could be faster, could be longer, but I think that's a timeline that makes sense for us.

David Deckelbaum

Maybe that can dovetail into my next question. As you think about heading into next year, you highlighted the $92 million in cash, and certainly the expectation next year of 113,000 tons of shipments through NAL and obviously we can put on whatever price we want there. How do you think about your capital commitments for next year and the flexibility that you might have in just managing some of the project spend?

Do you have sort of a concept of, based on where pricing is today, what sort of capital commitments you'd have next year?

Keith D. Phillips, President and Chief Executive Officer

Yeah, we haven't provided guidance on that. But I would say, we think we have a lot of flexibility. We've invested a lot already in the engineering of Tennessee and Carolina. We've invested a lot already in the Ewoyaa project in engineering there. That works really behind us. So, we'll have the opportunity to slow that down while we bring funding together for all the projects. And the priorities for us are getting Ewoyaa permitted and then beginning that construction process.

That's probably a year away, so capital spending between now and then should be quite modest on Ewoyaa. With Tennessee, our priority is really funding. Engineering work is very advanced. Front-end engineering design is almost complete. We've really done a lot of work with our team and our advisors on that. So, we can slow that down considerably, and we intend to while we go through the partnering process. It's possible, depending who our partner ends up being, they may have a slightly different point of view on some of the engineering aspects of the project. So, we're sort of at a point where we're going to preserve capital. We're going to focus our energies on the funding side and bring that together.

Similarly with Carolina. Carolina will be behind Tennessee in our current plan. So, we're really in a fortunate position. We had a strong cash balance. At today's prices, we have 50% gross margins, essentially, with our offtake agreement with NAL. And we can -- our funding commitments on the capital side are -- the commitments themselves are very, very modest and really backdated toward the end of next year once we have funding in place. And our basic plan is to de-risk these projects for shareholders by using third-party funding to the extent we can.

David Deckelbaum

Appreciate the answers, Keith.

Operator

We will take our next question from Joseph Reagor with ROTH MKM. Your line is open.

Joseph Reagor

Good morning, Keith and team. Thanks for taking my questions. Just kind of want to follow a little bit on the questions around Tennessee.

As you move forward in giving up the grant, would it be possible to still use that grant if another form of funding came along, or have you guys officially moved on from it?

Keith D. Phillips, President and Chief Executive Officer

Yeah, listen, the grant -- we were very pleased and gratified to get the grant. At the end of the day, that's a program under the bipartisan infrastructure law that's really being done in three in three phases. So we were part of phase one. There's a second phase underway now. And we've been encouraged by the DOE to apply for that program.

Ultimately, you can't have both a grant and an ATVM loan. They both come from the DOE. The initial guidance on that was different several months ago, but today it's clear you can only have one. Grant proceeds are terrific, but they're never going to amount to the amount of capital you could get under an ATVM loan, and some of the provisions within the grants make getting third-party commercial debt, project debt, difficult. So, we've sort of taken the view that we will maximize our ATVM opportunity. That will minimize the amount of equity we need to put into the project. It'll make it -- It'll put us in a stronger position relative to strategics in terms of kind of value of that opportunity, and we'll go from there.

We may ultimately consider the grant program for Carolina, but again, Carolina is both a chemical plant and a mine, so the CapEx will be bigger. So that's more likely to be ATVM focused as well.

Joseph Reagor

Okay. And then on that note, when will you guys revisit the capital budget for North Carolina and provide like an updated financial study?

Keith D. Phillips, President and Chief Executive Officer

Most of the CapEx in Carolina is for the chemical plant. We're working -- we've done a lot of work on the chemical plant for Tennessee. They're intended to be virtually identical. So, whenever we're ready to update the capital estimates for Tennessee, we should be in a position to update the capital estimates for the chemical side of the North Carolina plant. That'll be where the biggest changes will be done.

Mining CapEx will also grow likely. That DFS, I think, was December, '21. So, certainly the mining CapEx will -- I would expect to grow as well, but it won't be as significant. We are working on that working on that. We continue to do it. But we'll update it when we're ready. Realistically that'll be -- most likely that'll be when we have funding secured, in the case of Tennessee, we don't currently intend to publish an interim updated study. I think what we intend to do is kind of announce -- maybe announce that contemporaneous with our funding probably later next year.

Joseph Reagor

Okay. Fair enough. And then just real quick. What's the expected timing on the Q release?

Michael D. White, Executive Vice President and Chief Financial Officer

This is Michael. We expect to -- we have until this Thursday. So we will file right either tomorrow, Wednesday, or Thursday.

Joseph Reagor

Okay. Thanks. I'll turn it over.

Operator

We will take our next question from Matt Summerville with DA Davidson. Your line is open.

Matt Summerville

Thanks. Just a couple of quick for questions. One more in the near term. Based on the price dynamic you mentioned between contract and spot, and if you start selling material under the contractual type of arrangements. Can you remind us what type of lag we should be thinking about between spot and how that rolls into ultimately the realized pricing through your contractual agreements?

Keith D. Phillips, President and Chief Executive Officer

Yeah, thanks, Matt. I can't remind you because I don't think we've ever provided that guidance, and so I'm really not in a position to. We're going to work hard as a company to be pretty transparent in terms of our realized pricing and realized costs. We're going to do our best to keep kind of confidential customer arrangements confidential.

Ultimately, I would say, our contracts do have customary pricing with respect to lags. And ultimately, our shipments under these contracts are likely to begin in 2024 and kind of ramp up. So whatever lags are in, unfortunately, we'll not get the benefit of the prices of, say, early in Q3.

We're in the spodumene world, of all the folks in Australia who announced earnings last week, those who've been producing for longer had shipments through the quarter, many presumably under contracts and were able to realize lags. We had our two shipments sort of at the back end of the quarter, with pricing determined in the fourth quarter based on current levels. And -- so that's the way we think about it.

Matt Summerville

That's perfect. You actually answered my question. I was more curious whether or not you'd get any of that good or better, I should say, early Q3 pricing. At some point, it sounds like that's probably not going to happen. So the 27,000 tons of material being shipped in Q4, all of that, we should assume is shipped into the spot market then?

Keith D. Phillips, President and Chief Executive Officer

Yeah, that's correct. And I should mention, 27,000 is the estimate. Our agreement this year, as people know, is to get 56,500 tons from the joint venture. When you're loading a ship, some things can be imprecise. It could be a little more, a little less than that, depending on the size of the ship, the size of the holds, et cetera. But that's the rough guidance. And yes, those shipments in the second -- in the fourth quarter will be at spot.

Matt Summerville

Got it. And then just lastly, Keith. Just real quickly. Do you have an updated timeline, kind of go forward cadence for Carolina at this point, in terms of -- at least in the near term, what you expect out of the permitting side of things? Thank you.

Keith D. Phillips, President and Chief Executive Officer

Thanks. No, I think conversations -- we feel conversations are going well on the permitting front. We're in year three of that process, which seems like a very long time. It might be in some jurisdictions is not really from an American perspective. And we're hopeful we'll have significant progress next year, hopefully in the first half of next year, but we have no more guidance than that. We do intend to respond to the ADI-3 in this quarter, and we'll have more on that into 2024.

But as you think about modeling that and think about Carolina, Tennessee and the DFS is an $809 million capital project. It's probably going to be a little bigger. Carolina is going to be bigger still because it's the chemical plant plus the mine. We're not going to have the capacity to do both at the same time. So, in our minds, Carolina is a year behind Tennessee. That could shift, but that's our current way we think about it, which gives us time on the permitting side and takes pressure off from that perspective.

Matt Summerville

Understood. That's helpful. Thank you.

Operator

We will take our next question from Austin Yoon with Macquarie Bank. Your line is open.

Austin Yoon

Good morning, Keith and the team. Congratulations on the first revenue and the profit report in the quarter. The question is a follow-up on the pricing. Just wondering if you could just shed a bit light on the contracts and how often do you reveal the pricing model? Because as you highlighted during the presentation, there was a shift on the pricing mechanism in the September quarter. Should the lithium price rebound in 2024? Or do you see a risk of your customers pushing back for another change from M plus one back to M minus one? Thank you.

Keith D. Phillips, President and Chief Executive Officer

Austin, I'm not sure, I understood the question, but let me try. I think what you're saying is if prices rebound in 2024, do we see the spot market or our existing contracts looking to change the framework? Is that what you're asking?

Austin Yoon

In the September quarter, right, the price trended down. So, what happened in the market was that all the downstream was pushing for price-on-delivery instead of price-on-departure. If the price curve inverts and rebounds, do you see a pushback from your customers to change how the price is determined?

Keith D. Phillips, President and Chief Executive Officer

That's a great question. To be honest, I hadn't thought about that a lot. We think about this in the context of Tennessee. We're going to build Tennessee as a lithium hydroxide plant, essentially a conversion plant like the Chinese conversion plants, but better with mesolithic[ph] tech flow sheet. And we're going to supply that from Ewoyaa. That's our plan. But we're going to treat each of those businesses as independent entities. So, we're going to be doing transfer pricing at market. And as we think about it, we think the current market dynamic is actually quite sensible.

On one of the earnings calls last week, someone mentioned that it takes four to six months to get rock from the mine into a chemical that you can sell. So, if you're the converter, it's really important to have the price of the raw material aligned with the price of the material you're going to sell. So we actually think the current formulation makes sense.

That doesn't mean in a shifting market that converters might try to backtrack and go the other way. I think presumably if prices are ramping up, that means it's a tighter market and there's competition for the material and I think they'd be maybe unsuccessful with that. But it's hard to say. Again, in a competitive market where prices are rising, I don't think -- I think we'll have a lot more negotiating leverage. Any spot seller will at that point.

Austin Yoon

Okay. Cool. Thanks. Just really quickly, what are the key considerations during your search for a partner for Tennessee development?

Keith D. Phillips, President and Chief Executive Officer

That's also a great question. We are -- first and foremost, we're going to need capital and we currently own 100% of Tennessee lithium and we'd be willing to own less, we'd be willing to own anything down to 50%. We don't want to own less than 50%. It all depends on what the economic parameters of an opportunity are.

So, we need capital, so that means we need companies of scale who have capital. We're speaking to all the sort of people you might expect, customers, OEMs, battery manufacturers, other spodumene suppliers who may have material they want to bring into the U.S. to get into the business and others -- other mining businesses, et cetera.

Some of those parties bring technical know-how and experience that would be helpful or could be helpful and so that's a component. As we think about de-risking, obviously spodumene projects are relatively straightforward to start up as mining projects go. Lithium hydroxide plants at scale are a relatively new phenomenon. The folks in Australia have struggled, certainly from a timing perspective. So, bringing in a partner who has technical capability would be a benefit, so that's something we're considering as well. We're speaking to all the folks you might imagine. And I think if we wanted to, we could move forward with a transaction reasonably quickly, but the best thing from our perspective is to be patient and to really get the best deal for shareholders, and that will take several months.

Austin Yoon

Great. Thank you.

Operator

And we will take our next question from Greg Lewis with BTIG. Your line is open.

Greg Lewis

Yeah. Hi, thank you, and good morning. And thank you for taking my questions. Keith, I just really wanted to follow up, really, on that last comment you just mentioned about bringing on a partner in Tennessee, really in terms of the timing of that. It almost would sound like we would expect to get that ATVM loan ahead of a partner just because that probably improves the pricing terms that Piedmont would be able to get. Is that kind of what you were trying to say?

Keith D. Phillips, President and Chief Executive Officer

Yeah, listen the ATVM process takes time 9 to 12 months is a reasonable estimate that's what we're assuming it will take. Certainly, if we brought in a strong strategic partner and that partner would say a strong off taker one of the considerations for any lender including the DOE would be, who are you going to sell the material to? Who's your customer? Having a big strong credible customer would be helpful. The customer may or may not be our partner. But those are all things we're working on and we'll bring them together. And I think in an ideal world, you're right, we would bring in a partner and we would finalize off take arrangements prior to finalizing the ATVM process.

We'll certainly be advancing the ATVM process without that complete. The DOE has a strong team, they understand, what we're up to, they understand the nature of the product we're going to produce and the deep market there is for that. So I think that'll be the offtake and kind of partnering information will be information we can feed into the process midway and it certainly will reinforce it and it'll be important to have that before it's finalized.

Greg Lewis

Okay, great. And then I just had one more on the price paid from NAL. It looked like it was about $800, realizing pricing for spodumene has been volatile, but it was kind of below that ceiling of $900. Could you talk a little bit about that? And I'm assuming it's around the grade. But could you talk about that and how maybe we should think about that cost going forward?

Keith D. Phillips, President and Chief Executive Officer

Yes. The arrangement is $900 -- the ceiling is $900 for 6% concentrate delivered to North Carolina. So, there are a few moving parts. By far, the most important is grade. The average concentrate grade we purchased in Q3 was 5.3%. So, if you take 900 times 5.3 divided by 6.0, you get pretty close to that number. There are some adjustments potentially around freight and around some other elements that are relatively immaterial, but that's the best way to think about it. And depending on who we're selling the material to, and depending on the nature of the contract. We record the freight cost to get the material to the customer, either as a reduction of revenue or as an addition to cost. And that could vary by quarter. In this quarter, one of our arrangements had that freight cost counted as cost, which means the 806 is higher than it might be next quarter, depending on the nature of those two shipments.

Greg Lewis

That's super helpful. Thank you.

Operator

And we will take our next question from Matthew Key with B. Riley Securities. Your line is open.

Matt Key

Good morning, everyone, and thank you for taking my question. Most of mine have already kind of been touched on. But I was wondering if you could potentially just share your outlook for where you see spodumene pricing as we head into 2024? Obviously, tough thing to predict, but any color on where you think this market is kind of heading directionally would be really helpful. Thank you.

Keith D. Phillips, President and Chief Executive Officer

Yeah, thanks, Eric. Listen, I think the lithium markets are very inefficient. I'm a believer in capital markets efficiency. So I always believe the best forecast for the future price is today's price. That's not a very helpful answer. We're bullish. We believe over time that most of the projects people are modeling coming into production next year and in coming years we'll take longer to be funded to be built to ramp. That's just a general point of view we have. And we're bullish on electrification generally and on the EV thematic globally.

So, we're positive. We don't really have a crystal ball in terms of quarterly or even annual fluctuations, depending on what I think major factors like what's going on in the world from an economic and security perspective will probably overwhelm some of the other things I've been thinking about.

So sorry, that's not very helpful. But we're positive. We're very happy to have 50% gross margins even in this environment. And for our purposes, we model internally on a conservative basis. We want to be very careful to preserve our cash. But we're hopeful the prices will strengthen into 2024.

Matt Key

Got it. Thank you. Thank you for that. And I just wanted to touch a little bit more on M&A. As you mentioned in your prepared comments, you said, obviously, you've seen a lot of announcements in Australia, but lesser in the U.S. and Canada. Why do you think that is? And do you think the grown U.S. industry for lithium could also use some M&A? And where could PLL kind of play in all of this?

Keith D. Phillips, President and Chief Executive Officer

Thanks, Matt. And sorry, I was reading the list of questioners here incorrectly. So apologies for getting your name wrong. Listen, I think most of the spodumene produced in the world is in Western Australia today. There are a lot of exciting projects over there. Western Australia is an active mining market. There's some very deep pocketed, very capable, aggressive mining entrepreneurs over there putting a lot of money to work.

By definition, there are fewer opportunities in the U.S. for M&A. There are fewer kind of advanced projects. But I think certainly things will come here. In our conversations with the Australians, for instance, including some of the people that have been involved, they're all focused on the U.S. and Canada as sort of the next frontier. It's been a lot of activity in Quebec. There just aren't many spodumene projects in the U.S. and the people are principally -- the mining folks are focused on spodumene just from a risk management perspective and ease of getting into production.

Piedmont has been an acquirer. I mean we obviously were quite fortunate to make well-timed investments into Sayona and Atlantic Lithium and their projects. We've looked at -- we've been approached with literally over 100 other opportunities in the interim. The only one we've invested in was the Killick project up in Newfoundland, which we announced last month. It was a very modest upfront capital investment, which we think is a big upside.

I think as we de-risk our story, and I think this is an industry that's probably in the second or third inning of its evolution, and as stories like Piedmont advance and become de-risked and projects receive permits and receive funding and are being built and come into production, I think you'll certainly see significant consolidation in the industry. We may or may not be a part of that down the road.

Matt Key

Got it. Thanks for that color, Keith. And best of luck moving forward.

Keith D. Phillips, President and Chief Executive Officer

Thanks.

Operator

We will take our next question from Eric Boyes with Evercore ISI. Your line is open.

Eric Boyes

Good morning. Thanks. Two questions. First, back on the clarification that now price realization occurs at the time of delivery, not shipment. So, what is the typical timeline from shipment from now to delivery to a customer by a trading company? And then given that timing, is it possible we occasionally see a shipment in the given quarter that isn't kind of realized until the following quarter?

Keith D. Phillips, President and Chief Executive Officer

Yeah, great question. So, in the third quarter, the joint venture had a shipment through a trading company. Piedmont had two shipments. And interestingly, they each went three separate ways as you look at the globe. One of them went around the coast of Africa because the Panama Canal was clogged. One went through the Panama Canal. Our most recent shipment went through the Northwest Passage. And so it was really -- that was fascinating to me that the latter shipment got there in 18 to 20 days. The initial shipment from the JV took 60 or 70 days, if I'm not mistaken, so it varies.

And just to clarify, I should have spoken more precisely earlier. It's not stated --it's not written in stone that the price has to be at delivery date. The price could be in one of the shipments we had, the price was very close to delivery date. In another, the price was actually set with reference to delivery date, but a couple of weeks prior. So, if delivery date was, say, September 30th, the pricing might be set at September 15th retroactively.

In another, it's set the opposite way, kind of forward. So, this is a negotiation you have with the customers, in our case, through the trading companies we're working with. And there are always several buyers for any shipment, which is helpful. And you make the decision, you make and you hope it works out in the end, but you really don't know until the final price is paid.

Eric Boyes

Okay. Understood. Thanks. And then my second question would be kind of given the price volatility that we've seen and more specifically in the differential between hydroxide and spodumene. Is there any thought in linking Piedmont's offtake price at Ewoyaa to hydroxide to preclude some of that differential risk as it pertains to Tennessee? Thanks.

Keith D. Phillips, President and Chief Executive Officer

Yeah. It's a great question. On the pricing slide early in the deck, the reason we included the three lines, fast markets, Platts, and SMM for hydroxide and spodumene, and there's a third graph not on that page for carbonate. There are really nine different benchmarks you can contract with a customer for.

And in our experience, the customers in China, the conversion plants, they want to contract based on the chemical they're producing. So, if they're producing hydroxide, they run through their math of -- if the hydroxide price is X, I need Y tons of spodumene. I've got VAT of Z percent, et cetera. They go through the math and say, here's what we can pay, and that's how they calculate it. If they're a carbonate plant, they use carbonate. And our shipments have been based on different things.

So, I think in terms of how it affects Tennessee, this has been a very good learning experience for us. Our arrangement with Atlantic Lithium is that we will pay market prices. It's a pretty generic term, as you can tell. And we're very interested in having our market prices be linked to the hydroxide we'll ultimately produce, both from an economic perspective and also a timing perspective.

Over time, it should all even out, but that should be something I think Atlantic would be interested in as well. We are sometime away from -- we won't be in construction in Atlantic for another year or so. We won't be in production for a couple of years, but that's a detail we'll work out. I'd like to see Tennessee Lithium's spodumene input cost be market prices linked to the hydroxide price. We'll receive a Tennessee lithium around the time we'd be shipping material. I think it's just a very sensible thing and that should work for both parties.

Eric Boyes

Makes sense. Thank you.

Operator

And we will take our next question from Chris Kapsch with Loop Capital Markets. Your line is open.

Chris Kapsch

Hey, good morning. So, I jumped on a little late owing to a scheduling conflict. So, apologies if you touched on some of this already. But it sounds like you alluded to a variety of continued and ongoing strategic discussions with various players in different elements of your business. I'm curious, as you engage with downstream cathode or battery or automotive OEM players and talking about their needs. What's most important to them? What are they most focused on? Is it regionalization, supply chain, security of supply? Is it the ability to hit battery grade specs? Just -- and also just are those conversations still predominantly focused on hydroxide over carbonate, even with more momentum with LP gain share, at least over in Asia?

Keith D. Phillips, President and Chief Executive Officer

Great questions. Listen, I think, certainly, we're focused on hydroxide. The people we're speaking to need hydroxide. Some will need some carbonate as well, but most of the spodumene in the world will go into hydroxide. We certainly think it's the right thing for the U.S. market. So we're hydroxide all the time.

And I would say, the principal area of focus for people, frankly, is America. I mean, we're in Tennessee, in the southeastern U.S. surrounded by EV plants that are being built, cathode plants that are being built in Tennessee, South Carolina, and elsewhere. With the backing of the Inflation Reduction Act, everybody, the big Korean battery companies, the big U.S. and foreign OEMs, they all want to be here. They need to be here in scale. There's just going to be a dearth of lithium hydroxide available domestically. That's a problem. Even without the IRA, that's a problem. But with the IRA and with the benefits of having domestic supply, it's a big issue.

Adding to that, within the IRA, there's the 45X tax credit which makes American tax-paying entities that gives a tax benefit to American projects is very substantial, more so than if the project were in Australia or Canada or somewhere else. So, people are very excited about that except they're going to invest a lot of money in a big capital project. They want to make sure the economics make sense.

The final thing I'll say about Tennessee, our experience selling spodumene has been really educational in terms of the importance of Tennessee. If you are a spot seller of spodumene concentrate today, the only buyers -- in terms of producing spodumene -- the only buyers are the Chinese converters. There are no others.

So obviously, the Chinese plants don't benefit from the IRA from a 30D pricing perspective. And there's significant VAT paid in bringing material into China. So, the spodumene everyone in the world is producing is worth way more to them and to us going into a place like Tennessee than it is going into China. And the people in the industry know that. The car companies, the battery companies, and other spodumene suppliers. So, it's really interesting. We've been really gratified. The more we learn, the more strategic we're confident Tennessee is for a lot of people.

Chris Kapsch

Got it. That's helpful. And just as a follow-up, and also based on your engagement with these players. There's obviously public equity markets right now, sentiment is sort of subdued to say the least. But just curious, and I know your answers will be biased, that's fine, but just curious if your engagement with these players, if there's any indication of some of the perceived negatives of feeding into sentiment like slower EV demand, or maybe pushback on the IRA and the spending associated with that? Is there any sense of that adverse sentiment feeding into those conversations you're having with those strategic bank.?

Keith D. Phillips, President and Chief Executive Officer

Thanks, Chris. No, I would say not at all. The strategics who are long this business are committed, and they may or may not adjust their timelines going forward, but they're committed. They're very supportive. They understand the strategic imperative and the strategic attractiveness of a project like Tennessee. So, very positive.

Chris Kapsch

Thanks, Keith.

Operator

And we will take our final questions from Noel Parks with Tuohy Brothers. Your line is open.

Noel Parks

Hi, good morning.

Keith D. Phillips, President and Chief Executive Officer

Hey, Noel.

Noel Parks

Just had a couple of things. One is, thinking about the processing business in particular, and maybe earlier in the Piedmont story, the mining loomed particularly large in Tennessee. The standalone processing business is part of that fully integrated vision that you have. So, as we look at the ramp-up in demand and then ultimately production, I was wondering if you could talk a little bit about how you see the margin evolving.

And I'm wondering. Is it a case when you look at scenarios that sort of when we hit that peak under supply point, is that sort of going to be like a historic [ph] bulging in margin right there with prices? Or is it more -- do you look more to further out when you are really at a fully built-up scale and the industry is closer to production scale? So, I was wondering how you think about that?

Keith D. Phillips, President and Chief Executive Officer

Yeah, Noel, it's a good question. We've gone through a few cycles here since I've been in the lithium business. And -- down up -- and now prices have come down again. And certainly a year ago, everybody in the sector was collecting very substantial margins, really, especially on the upstream side. And so for a lot of people that questioned our strategy about ultimately going downstream. We have a view that in the long run, downstream margins will be substantial and more stable and certainly more stable than upstream margins.

We think being a provider of the specialty chemical lithium battery quality lithium hydroxide will earn us a premium multiple in time once we're at that stage. It's obviously several years away.

I will say in today's market, and this is important consideration as you think about supply, anyone modeling supply, in today's market to build a 30,000 ton hydroxide plant, if the capital in our DFS was $809 million, and that was some time ago, and you just think about roughly a $1 billion capital project, to spend a $1 billion, to raise $1 billion to build that plant today with the current margins implied by prices, people talk about the incentive pricing required, is very tough. It will happen in Tennessee because of the ATVM program and because of the strategic nature. I don't know how you would do it in some other parts of the world where you didn't have those two things. It would just be really tough.

So, what that means to me is margins in the downstream side have to expand. They just have to. I mean, especially if the world is going to demand material from outside of China, they're going to have to expand. China margins -- the CapEx in China is considerably lower, and thus you've seen some global, including American companies, invest heavily in China in the past. We think in the long run we want to be in the U.S. but we think those margins have to expand. We think they will. But it's going to be volatile and lumpy between now and then, but we think that there has to be a higher margin business than it is today.

Noel Parks

Great. Thanks. And then I wanted to turn back to NAL. I wondered if you could drill down a bit more on the new drilling up there and was curious about the good results you had recently, I think you said to the northwest. Were those just in line with pre-drill expectations or somewhat of a surprise?

And also wondering if you could talk a little bit about how the construction projects on site like, for example, the dome are coming?

Patrick H. Brindle, Executive Vice President & Chief Operating Officer

Yeah. Thanks. This is Patrick. I would say that drilling results were pleasantly surprising. We had indications from earlier data that there may be positive drill results trending in a northwest direction from the existing pit shell. Of course, over 2023, we've undertaken a broad drill campaign to do two things. One, continue to upgrade mineral resources within the existing pit shell from inferred to indicated category and then convert them to ore reserves.

But I think based on the discoveries to the northwest to date, we'll expand the drill campaign going into 2024 and probably reevaluate pit design on a long-term basis. I would say, what we've seen thus far probably does not impact operations over the next one to three years but is really medium to long-term potential to either expand capacity or increase mine life at NAL.

Shifting to capital program, again, the two main things that we are focused on over the next six months are completion of the tailings storage facility lift before the end of this year. That will give us several years of tailings storage expansion at the mine. And then the completion of the crushed-ore dome, which we hope is completed in April of next year. This is the most significant capital project that remains from the NAL restart program.

This will allow us to disconnect the operations of the crushing plant from the mill, which ultimately then should result in increased mill availability. This is the main driver for both improvements in product quality, as well as improved run rate on production target.

Noel Parks

Great. Thanks a lot.

Operator

And that concludes our question-and-answer session for today. I will now turn the call back to Ms.Erin Sanders for closing remarks.

Erin Sanders, Senior Vice President, Corporate Communications & Investor Relations

Thank you, Abby, and thank you everyone for joining us on this call this morning. If there are any remaining questions, we are happy to arrange follow-up calls with Keith and the management team. And with that, I thank you, and have a good day.

Operator

And ladies and gentlemen, this concludes today's conference call. And we thank you for your participation. You may now disconnect.