

Mike Alkin

Chief Investment Officer & Founder



► **SmithWeekly:** Welcome to SmithWeekly Discussions an occasional program for our readers and listeners of SmithWeekly Research, please note this program is a private discussion and everything contained herein is for entertainment and educational purposes only. With that, we hope you're in a comfortable position along with your favorite beverage to enjoy the discussion. Before we get into our discussion today we want to say thanks for the questions coming from our audience at SmithWeekly including @FeedsExplores, @iammpremm, Julian S., Angel Martin O., BCS, Hayden L., Jonathan J., Markus K., Nick D., @CloudMagellan and Terry P.

So today we have Master uranium expert Mr. Michael Alkin on the line. Mike is Chief Investment Officer and Founder of Sachem Cove Partners LLC, a private uranium vehicle that has been set up to reap the coming rewards in the uranium sector. Michael welcome.

► **Mike:** Andrew how are you? Thanks for having me.

► **SmithWeekly:** Is there anything about your credentials and our introduction that you'd like to clarify, all good?

► **Mike:** Nobody's ever called, my kids and wife would laugh, if they heard you call me a master at anything.

► **SmithWeekly:** So like falling off ladders, right?

► **Mike:** Yeah, exactly.

► **SmithWeekly:** Good, we often get that, you know the master, professional, expert thing we have a internal joke about it. So Mike another one on the comedy side, your Twitter profile picture with the guy with a stoggie in his mouth, is that you back in the day?

► **Mike:** That is my favorite TV show of all time Columbo. Detective Columbo, Peter Falk and you know Columbo is always the guy that was kind of a little rumped and the guy that people just kind of underestimated and he just kind of was just doing his work but always had his eye on the ball so that was always my favorite TV show character.

► **SmithWeekly:** Good stuff. I'll have to look up that show and of course that kind of puts my age in light. So tell us about Sachem Cove, the funds under management, tell us about the team there in the reason why folks should look at this business.

► **Mike:** Well, you know, I just want to be clear this is a private investment partnership formed to invest in the uranium cycle. We express the view through a vehicle that is a private investment partnership only available to accredited investors. I won't go into a description of what that is people have to look at what an accredited investor is and in terms of what we do, we scour the earth looking for both public and private uranium investments to express our are bullish view on the uranium sector. So that's what Sachem Cove is.

I mean look the last three years of my life has been devoted to really understanding a very opaque complicated industry from my perspective having been in the hedge fund business over 20 years and being a generalist for the most part especially the first portion of my career and I was a short seller, pretty much a dedicated short seller early in my career. But what you learn when you live and you're a generalist, you look at all sorts of different industries and you know you parachute in and you try and understand the fundamentals of the industry and by doing your own analysis, you know, the financial analysis is one thing right, so balance sheet, cash flow statement analysis, income statement analysis, and understanding capital structures. That's part of being a financial analyst but you know, the hedge funds that I worked our job was really to be like detectives, investigative journalist detectives, with a lot of financial chops that knew how to do a lot of deep dive financial work. But you know, what our goal, my goal was my career was spent analyzing industries across the globe pretty much every industry out there. I've probably looked at in my career, you know, sometimes you're in there for a cup of coffee, you know, brief view and you might spend a few weeks, a month, and other industries you might really start to form a thesis and spend many months or years sometimes doing it and you might not look at that industry again for a couple of years, but you come back and take a fresh look at it. It just depends what you're looking for whether on the short side or the long side.

Sometimes you get an industry that you sink your teeth into and you know, you're out in the field, the newsletter industry likes to call it boots on the ground research, you know, whatever it's primary research, it's field research. It's forming an opinion based upon compiling a consensus a mosaic of information because there's consensus which is the sell side analysts which have if they're covering the industry which most industries have it and we'll get to uranium and how that's pretty much disappeared but there's some consensus of numbers for expectations and that's formed typically by the sell side and your job as an analyst in the hedge fund world, what mutual funds and other private money managers do, but your job is to go out and understand if consensus is correct. The way you do that is by talking to people throughout the supply chains, throughout the cycle, throughout the supply chain of the industry. So you might talk to suppliers, you might talk to customers, you might talk to people who are being services to the industry, consulting services to the industry, speak to former employees in the industry or industry people who consult on the industry. You're just looking for information and you're looking to take all those pieces of information and going out into the field, talking, interviewing them and putting that information together to see if it's squares with what consensus is and you're taking the numbers. So if you're looking at any industry, whatever it may be if you're looking at well, what's the revenue, how do you generate revenue, what's it comprised of is it comprised of price and comprised of volume? Then when you're looking at your profits what's the mix of what they're selling? Is it, you know, what percentage of lower price products, mid price products, high price products. Is that changing is that morphing over time and if so, is that being captured in the consensus number? How are people coming as their new technology that's causing changes to an industry that's causing the cost curve to go down. Is it being captured in consensus? Is there something new that's going on? So that's kind of how you go about looking at it.

So three years ago what caught my attention was the uranium industry and you know through my career I've worked at a couple of hedge funds that had a deeply cyclical very value-oriented meant to them and so industries that are either very in favor, out of favor that are deeply cyclical or something like that I tend to be drawn to which is not always easy, but that's because you're oftentimes looking to see consensus is typically very strong in one way if a market is in the elongated bear market or in an exceptionally elongated bull market if an industry is in one of those markets consensus tends to capture all of the good stuff and all of the bad stuff if it's in the bear market and over time, even the industry participants, they envelop the consensus if you're in an industry that has been beaten up for four or five years and you're working in that industry and you've seen colleagues and people just losing jobs and you start to hear everything your people are saying and you start to see people disappearing, desks emptying out, guys you used to confer with on a regular basis are no longer there. This guy lost his job at that guy lost their job. It starts to permeate everywhere and the negativity starts to occur.

Now in most industries, there's a lot of eyeballs looking at it. So, you know in these deeply cyclical industrial or machinery companies or natural resource companies be it copper, gold, etc. there's tens of thousands of people analyzing and looking at these. There's a countless number of sell side firms that are writing research on them because most of them have big companies and there's a lot of banking business to be done and so there's still attention paid to it. They're big markets. Uranium is different, uranium at one point was a hundred and thirty plus billion industry going back, you know into the middle part of the 2000s, you know, when I started looking at it, it was a little over four billion dollar industry and half of that was one publicly traded company Cameco and so what happened? The institutional investor disappeared, if you're running any fund of any real size you can't invest in an industry that's small if there's one company that you could choose, you know, if you're running a billion dollar fund plus you really can't if you wanted to have a 3 or 4% position in a company you need to buy. If you're just a billion dollar fund you need to buy 30 million dollars worth of stock. Well in many cases in the uranium industry that could have been many of the companies so typically as a fund manager most guys don't want to own more than 5% of a company sometimes more, 10% of a company then you get into control issues. So it really limits. You started to see the institutional interest dry up funds are not in the business of catching falling knives, right?

It's a very competitive landscape if you're running a hedge fund or if you're running a mutual fund. You're competing against your peers and so in and when industries aren't working, time isn't your friend necessarily you don't have the luxury of saying here's an industry I think is mispriced. I'm going to wait it out for a year and a half or two years because I've never seen values like this, but it could take a while for the healing to occur. They don't have the luxury of time because they're reporting numbers. If you're a mutual fund it's daily if you're a hedge fund it's monthly or quarterly and so people tend to avoid the really beaten up industries. If you're a generalist hedge fund and you see the uranium industry had just a complete vacancy from, and still mostly does, from institutional investors and that caught my eye because I couldn't really recall an industry when I started really diving into it three years ago that was so vacated, that was so left for dead, and yet was so important to the global landscape, the global energy landscape, you know, and specifically in the U.S. nuclear power is 20% of the electric grid. It's 12% of the global electric grid and you know, it's a big business. It's meaningful. I mean it changes countries and lives, it's important. Yet the institutional ownership was gone. The number of companies had shrunk from 500 at the peak, 250 maybe, and then less so as an analyst you go back to the Colombo stuff right on my twitter picture, you know, you're out doing investigative work and so one of the things when you're an analyst working where these funds were, you know, bring your professional analytical eye to it, let me see what the sell side is saying. What the hell are they thinking about it. The investment banks and the research that they write and as I started to

look at some of the research that was out there what caught my eye was many of the major investment banks had closed down their uranium research business because there was not anything to be done. You weren't going to employ a bunch of research analysts at a major investment bank to write about uranium companies that money or institutional clients cared about and there's very little investment banking business to be done maybe with the exception of Cameco, but the smaller companies that were in survival mode and they were too small they had market caps of 30 million 40 million 50 million. That's your average. Who's your client that is going to be interested in those type of companies? There was some in Canada and there are still some investment banks that were smaller, a couple of small U.S. banks that were covering it but not a lot of eyeballs on it. What happened in the uranium world is these analysts had been calling, not all of them, but many of them had been calling for a turn in the market for years so that never occurred so their voice was falling on deaf ears and so for me as I started looking at it I said, wow, this is a pretty cool setup. You've got an industry that's been left for dead. It's a meaningful part of the global electric landscape. The institutions aren't there. Let me explore it further and that was you know, I laughed when you introduced me as master expert uranium guy. Years ago I could have not told you anything about it. I had looked a couple times in my career for very brief moments and just moved on to something else. My wife and kids would laugh at you calling me a master, an expert at anything but I realized then you know go to where others aren't. I tended to find my best ideas when you're fishing alone. When you are looking where others are not focused because that's where you can find asymmetry much more reward than the risk you're taking. So that's how my journey began in uranium.

► **SmithWeekly:** Yeah and for the record, we don't think you're a master expert at uranium, but we can say with that, of any of the people out there that proclaim to be an expert at these types of industries, we can say that the amount of hours, whether it's 5,000 plus or whatever, that's added up over the couple of years, we can say that you've done a lot of work on the business and you're getting near that level.

► **Mike:** Well what I can say is, you know I speak to groups and I spoke recently to the Nuclear Energy Institute, NEI, and I'm happy to tell when I'm talking to a room full of people that are in the nuclear fuel industry. I am not a nuclear engineer. I am not a mechanic, a mining engineer. I'm not a geologist but I understand the laws of supply and demand and more than anything. I'm a grinder, I know how to put the numbers together. I know how to fire up a spreadsheet and I know how to go find information and that has been a big part of which created my conviction for the industry.

Now what I will say is, you know, because I am in the field talking to people doing this and I'm not afraid to say explain to me what that means and I'm not the sharpest tool in the shed, but I'm a pretty quick study on stuff and what I don't know, excuse me, I'm going to learn. So I made it my life mission to really understand the nuclear fuel cycle, understand how it comes out of the ground, what's the next step, it goes to conversion from there it goes to the enrichment from there it goes to fabrication and every step along the way. I made it a point to really understand the drivers of each of those and to understand what causes pricing to move what drove excess supply. What drives the demand there? Who are the players? So I made it a point on every step along the way to just do really deep dive and I would go out into the field and talk to people, I'd cold call people. Here's who I am, here's what I'm doing, I'm trying to get smart on this, I'm probably going to ask some stupid questions, and give me a little bit of time. People are very helpful out there and then like anything, I read, I'm a voracious reader. So if I wanted to understand again knowing I learned a long time ago to know what my strengths and weaknesses are. I'm not a mining engineer. I'm going to go find them. I'm not a geologist. I'm going to go find them and we're going to and I'm going to ask them to

help to educate me and what are the things I need to pay attention to and not and I also know that I'm never going to have that level of expertise, but I'm going to be able to kind of know and what they're telling me and of course you want to know what's their history? What's their background where they've been successful where they failed. You know, I was a quarterback in high school and my job was to know every player on the field. What was their role on every play? I had to know that right? So it's no different. It was the same and so for me as I started that journey it started to come together. But what drove me before I did all this is that I wanted to see if it was worth my time with my investigative time and that's when I started getting numbers, what is consensus, who forms consensus, sell side isn't really there as I started looking at some of the sell-side numbers I started noticing there were references to the World Nuclear Association references to other consulting firms. Ok, well one of the big things that drives me is understanding people's financial incentives. It's so important and everything I look at and you know, so tell me about this organization who are their main subscribers, who belongs to it, who pays their fees. How does that work? So the utilities are the big drivers of these. Well, I don't know what that means but I understand it's not the uranium miners that are keeping these organizations in business. It's the consumers of uranium. Well, maybe just maybe there's something behind something to investigate in that meaning investigate to understand. How are the numbers put together, what's factored?

So as I started looking at the numbers and I started going to conferences I show up at a nuclear fuel conference, at a fuel buyers conference, at a nuclear association meeting, you know and it's not cheap. You pay your 2,500 bucks and you show up, you spend three days, you listen to meetings, you go grab a cup of coffee, you shake somebody's hand and say here's how I am going to ask some stupid questions. You got a minute and embarrass yourself just go out and do it. So when I started doing that I started to look at the numbers and I said, huh, wow, that's interesting. The association really doesn't get involved in forecasting the price of uranium. So their forecasts that are out there for existing projects can those existing projects continue out into the future until the life of that mine expires. Nowhere in there though am I noticing what the cost of these are and then on some future stuff that's coming down the pike there's some layered in there that's going to you know, future projects will come in and some of those are coming in and it really doesn't kind of matter what the price is. Well, how is that possible and that's when I started to say well wait a second it might be here that in this organization that the way these numbers are compiled if forecasting of prices are factored in well, geez, I know at the time that the price of uranium was in the low 20s and I knew from doing some reading that the average cost to pull it out of the ground with somewhere 40 to 50 bucks. I said, well, you know, I'm not the sharpest tool in the shed but if something's costing you more to sell than it is to make then the math doesn't work so something's got to give and as I started to then look at some of the numbers put together by the sell side, they were referencing these organizations and I said wait a second. You've got an industry that is left for dead. Say what you want about professional investors the institutions one thing I can tell you is you got a bunch of really smart people in those places and when they fire up their spreadsheets and do math, they get the math. They may not get the judgment right, but they could do supply demand and all that stuff, but nobody's really paying attention. There's no ownership in these things and if I'm a sell side analyst at a firm and I'm a mining analyst and I'm not a uranium mining analyst because that guy's been fired and I'm a generalist.

Analysts covering the big mining companies are not going to dive down into the nuances of nuclear power. It's complicated. I'm going to use what the industry says and there's something here and then I sort of look at some of the other bodies that put numbers out there. I was comfortable that those numbers weren't reflective of what I thought might be occurring and that's when I just said, let me go out and understand the case for nuclear power and because you know as a westerner, I didn't know that nuclear power was 20% of the U.S. electric grid. I didn't know, I thought nuclear power, like anyone else, it's kind of probably dying, isn't it? What do I know? But I said, let me

see I knew throughout my career, I've looked at solar and wind and alternative energies typically from the short side. I know they're growing rapidly. So let me see, is there a case still for nuclear power and let me see is it a competitive thing? Is it a complimentary thing and I investigated that and I concluded that for electric utility grid scale, wind and solar weren't ready for that yet, but they were growing by leaps and bounds, it's there, they have their place, but storage costs were really high and I walked away after a few months and said, you know, I think this is complimentary and then I started really diving into the fundamentals of nuclear power and what's the case for it. After a few months of that I just said, wow, sold, hook line & sinker. Clean, carbon-free, the safety element of it on a per terawatt hour of anything produced, the safest out there, it's two-thirds of the U.S. carbon-free emissions and I thought, wow, that there is a case here for it now. So what was going on? Well, low natural gas prices and I always knew nuclear power plants, just from reading the papers, were really expensive and always over budget. But most of the costs are capital costs they're big sunk capital costs, you know, a big reactor cost you 10 billion, 12 billion, pick a number, it's supposed to be online in 5 years, figure 12 at least in the west, and the maintenance costs are high, the big regulatory burdens. I kind of probably knew that in the back of my head just from osmosis of being an investor and reading a lot but as I started diving into it something jumped out at me, which I wasn't aware of was the feedstock element was, you know, the nuclear power, uranium itself, you know, the front end of the fuel cycle could be 17 to 18 to 20 percent of the overall cost of a reactor, but the actual uranium itself can range depending on price from 4% to, pick a number, 7-8% and that ballpark versus coal and natural gas which I knew better because a couple of the firm's I was at had big energy presence sitting in meetings and listening to my partners talk, I knew that coal and natural gas could be 70-80% of the operating costs. So as I looked at this clean source of power that was carbon-free and I realized that the price of what the utilities paid, it's not insignificant, but it's much lower than alternatives, much lower. But with the shale revolution in the U.S. natural gas prices imploded. So the utilities were shifting to natural gas fired power plants, coal is going away and so as I started looking at it I said, okay, well, let me lay out all the reactors in the world and I fired up Excel you got to go find this information. Let me look at all the reactors, see how big they are, when did they come into existence, when are they going to occur, when does the license expire, what are the chances that the license is going to expire and then let me take every reactor that's out there and let's look at it by country.

Let's take a look and see what countries are going to be taking the nuclear power and making it less of their energy mix or maybe closing it down. Obviously, Germany is one, Switzerland is heading that way. The U.S. is under great pressure with low natural gas prices. So I then started to compile by country the likelihood of what reactors are going to start coming off the grid and I wanted to then understand that by country of all the nuclear producing countries and take a somewhat draconian view of that and take those reactors that I thought were not competitive out and it required a lot of research and investigation. Let me take a look at the reactors that are under construction and which stood out at me was that this time period if I went back to the time the last cycle turned in, 405 reactors online there were 23 reactors under construction at the time and there was big mines coming on, tens of millions of pounds of new supply scheduled to come online and I looked at this environment and I said, wow, at the time, there were 60 reactors under construction and that's where I started to do the math. I said, wait a second because I had started to lay out all the mines in the world by country and all the new projects that would be needed so as I laid out the reactors by country all the heavy closures and all the new reactors that were going to come in by country by year throughout through 2025-2026 as I started looking at that, nuclear power is actually a growth industry. Again, I was draconian in my closure assumptions U.S., France, I was very aggressive with Belgium, Germany, Switzerland, South Korea, and then I started to layer in those under construction and then for my forecast period which goes out to 2028-2030 on a few different things, I started looking at all of the number of countries around the world, where is it growing? It's growing in the emerging markets. You could bring millions of people

onto the grid and you can bring them on and you got clear pollution problems in China and India is horrific. It's at crisis levels, but here it could bring on clean energy and in countries typically where the population doesn't have much of a say. I can't see a lot of anti-nuclear protests in China. This is kind of a one percent grower give or take a little bit and if I started to layer in some of those planned reactors, let me bring in just a small fraction of some of the planned reactors that have approvals, they just haven't been constructed yet. You can dream up a little and see it's a 3% annual grower.

So I looked at that and I said there's something to do here and that's when I then was layering in you know, when a new reactor comes online, in its initial fuel load at least two times the amount of uranium it will consume per year some people use up to three times in their math, but I used two and as I started doing that and then I started looking at when some of these mines were scheduled to come off line, some of the bigger mines and then I started looking at what was the cost to operate these mines, and I'll get into that second, but as I started doing that, you know that I'm dealing on the primary mine supply side, now the association doesn't take into account forecasting price. I certainly can and I started to say well wait a second the nature of the industry is such where even though the spot price of uranium had gone from \$137 back in 2007 down to the low \$20s. That's not the price. These companies were selling off such that they have long-term contracts. So the price of uranium could have been \$23 but companies were selling at \$50 and \$60 and \$70 contracts and they don't have total exposure to spot so they could have been covered. So as I start thinking I said well when those contracts start to expire my gosh, you're going to, how can you reenter new contracts if the spot was \$23 and term was \$30, what CEO could actually do that and keep his job? How do you do that? When it costs you \$40 or \$50 to pull it out of the ground you can't so that's when I started to take some liberties in my analysis, ok, well, let me get my head around going and reading all these reports, listening, talking to companies, reading what they're saying, and who are the ones that are really going to be at risk? How many pounds are going to have to come out of the supply and at the time that wasn't part of the math that wasn't part of consensus. Consensus was all these things are there and there's all this secondary supply and when I started doing just basic supply demand economics is knowing how a public company works. That's most of these except with the country of Kazakhstan which now is, but at the time wasn't pretty obvious to me that a significant amount of supply was going to have to come off line over the next 12 to 18 months. It just had to you can't, you know, Rick Rule has said this and it's right, you can't produce it for \$50 and sell it for \$20, the math doesn't work. But again, no eyeballs looking at it, left for dead and there you were. So that's what started to get me really excited and then I started to get into the secondary sources, but I've been rambling so I'll let you ask me questions.

► **SmithWeekly:** Well Mike that's been a long winded comprehensive view and I would suggest that the audience take some notes and prepare for a longer session here. So I think what you said, there's a lot of interesting points and you know people should become familiar with Excel, it is a very powerful program and you're going to need it especially if you want to really understand all the way to the bottom.

► **Mike:** I'll tell you the beauty of this, Andrew, my kids laugh because I, you know, I can't help my 15 year old daughter with geometry, but calculus I never got but I was really good at fourth grade math and really that's all you need to understand finance and supply and demand. If you could add, subtract, multiply, and divide you got the world of uranium. Just roll up your sleeves and you got to go out and it's a grind and you got to just be prepared to spend a ton of time. If you're prepared to do that, you know how to do basic math and you could start to get there.

► **SmithWeekly:** Right, absolutely. Mike moving on so we know you represent Sachem Cove and yourself personally, while you might not be able to comment on Sachem, you've been mute regarding your real thoughts on some of the best companies you like in the uranium space. So are you breaking that silence with us today?

► **Mike:** I am not. A couple of things, you know, I'm quite cognizant that over the last year and a half or so that I've become a public voice of uranium, which is just random. I mean who knew, I gave a presentation April of 2017 on Real Vision and then it turned into speaking at conferences and then having industry associations asking me to speak because I brought up some issues that haven't been discussed and hadn't been explained and that turned into a public thing and one thing led to another and like I said, I laugh when people call me uranium expert but you know, there's a vehicle that I'm in charge of and the first thing is I don't want to use my voice, my public voice as saying here's something I really like because I don't know who's listening to me. I don't know if it's something that they want to own or not. They don't know why I want to own it. I have a vehicle that has a time horizon and there are investors in that vehicle who have an extended time horizon. Now, I think that time horizon is very soon, but I don't know some people might be traders, some people might like to whip stuff around. I pay no attention to that stuff. I don't want to be influencing them and I also have an obligation to my limited partners who are paying me to provide my best efforts for getting at the best prices that I can for investments in this vehicle. So, you know, I don't want to unnaturally influence the price of a stock because I come out and say oh here I really like it and here's where it is. These stocks are so thinly traded, this is an Apple, this isn't Microsoft of where if I came out and said something who cares right, nobody cares, but these stocks could trade twenty, thirty, forty, fifty thousand dollars a day. There's nothing, there's no volume. So, you know, I could be out in the market at any given day accumulating shares. I could be buying a block from somewhere. I could be there at times where I might be financing through a private placement or something. There's all different reasons.

I'm happy to share my macro view and people shouldn't take my word for it, do their own investigation, you know, one of the things throughout my career I've been wrong plenty, you know, if you're a good investor, you're going to be wrong and throughout my career I've had investments that have not worked where I thought they would work with best efforts and everything. I'm happy to share my work on it and I'm happy to share my thought process on it. But in terms of the companies, you know, for a myriad of reasons, I don't like to talk about them and also quite frankly, Andrew, I'm on Twitter and it's a big platform and if I start talking about individual companies I get bombarded with direct messages, I get bombarded with people tweeting me, and I've done, again, I think my work is right, but it may not be but I've done an enormous amount of work whether it's on the industry and on the individual companies and so if I'm to start opining on something and I've seen it on just different things on the macro uranium stuff people come at me with a million things and it you know, I would spend all day on Twitter, be almost all of it that comes at me is random, and it's well thought into my analysis and I don't have the time or the interest debating and arguing people for stuff that's half-cocked. So anyway there is a proprietary to my work and the proprietary is reserved for the vehicle that I have.

► **SmithWeekly:** Very well and I think it's important that the audience and folks need to understand your position on it because their position is different than your position and you know again, we don't have the time to discuss, you know, there's plenty of stuff out there do some research. There's lots of free stuff out there on the internet you can start with. Bring the intelligent debate from there.

▶ **Mike:** I love intelligent debate. I love intelligent and I love people coming out at me with a great bear case and as you could probably imagine, I'm sure you see it too being public on uranium, I get it every which way til Sunday, but after a couple of years now and I encourage, it does get a bit exhausting answering the same questions over and over that are just not accurate. They're unfounded there. They're based on not a lot of analysis. So after a while, you know, I've really toned down my commentary on Twitter. If I see something that somebody says, something materially incorrect, then I'll chime in but you know, a lot of time people I'm dealing with institutional people who are trying to get up to speed on the industry and there are some bears, people come at me with that.

A lot of it is very obvious, the obvious bear case. The bear side, that's kind of how I came at this industry by the way, and I didn't mention this when I started doing my work. The first 10 years of my career, I was a dedicated short seller. I mean I was in the weeds. I was looking for bad companies and bad guys, looking for bad stuff. I came at this and said, let me see if I could prove the bear case if I can I'll go look at something else and I couldn't because the bear case was so obvious and still the bear case is there. Well what if a reactor blows up, China stopped buying uranium, I suppose they can, they never build another reactor. Some people say well, yeah, okay but all this uranium is going to come out of the ground when the price gets to 40 bucks. That's consensus. Now I could explain my thoughts on that, you know, there's enough information out there on the macro uranium thesis for people to dive in and do their own work.

▶ **SmithWeekly:** Absolutely. We respect your decision on this of course, we needed to ask it and we may twist your arm a couple more times before this is over, but we wanted to ask it for the sake of our readers who asked us to ask you.

▶ **Mike:** No, I totally get it and look, you know, I own a few of the companies that you would expect I would own.

▶ **SmithWeekly:** Right and look if people want to know what Alkin's doing go ahead and join the fund to put your money where your mouth is.

▶ **Mike:** Well, even they don't know. We tell our investors, you know, they get commentary from me, they can speak to me, they might know a couple of positions we own, sure. That's for people who invest in hedge funds understand how that works.

▶ **SmithWeekly:** Right and there's no doubt being a part of the fund you get direct access to Mike. So it makes sense.

▶ **Mike:** Which we're very close to not accepting new ones because we're happy with where our asset level is but yeah, okay, I'll give you one. Do I like Nexgen? Yes, I do. I think it's a world-class asset that is materially mispriced. Yes, I do, so there you go. I'll give you one that shouldn't surprise people. So some things are just world class. Yes, it's had a tremendous move from discovery to where it is but do I think when the institutional world wakes up to the sector again, and it's starting, having friends in the industry who showed no interest to now wanting to pick my brain or institutional allocators of capital who are now putting capital to work in funds that are doing this, you know, they will find that with some world-class assets right. But what I don't say, is it a small position or a really big position? I don't talk about that. That's one that I think is great. I also own a private uranium company that has mineral rights in the United States.

► **SmithWeekly:** Yeah, and people need to get that there's a time and place for everything whether it's a liquidity of a New York Stock Exchange listed company, exploration play in Africa, the timing related to stories in Africa versus Canada. There's always a time and a place for everything.

► **Mike:** Right. There's a time where look at the way I have the portfolio, really big positions at the top and then I have a small bucket, have a small percentage devoted to way more speculative stuff where I think the risk/reward is significant, but there's a chance that something doesn't happen and if I'm wrong then I get pummeled so that's another reason why I don't like to say names. I might like this name, but it could be a couple percent position which means not a lot.

► **SmithWeekly:** What position sizes do you use at Sachem Cove? Give the audience an idea of a position size that you might use in percentage terms?

► **Mike:** I mean if I really like something I'm comfortable at double digits. Okay, if you know if something's really a flyer that's speculative it might be just a few percent. So it's not Sachem Cove specific I've used this style throughout my career. But if you think about how I take my view of managing is you don't get a lot of shots at the apple. So if you think you're right on something you got to make some bets. So if you have really high conviction, I'm comfortable at low double digits maybe a little bit more. If it is speculative nature, and these are all speculative by the way, even the best uranium company is highly risky highly speculative. I don't care what it is. Small can be 1-2 percent is how I've always thought about a portfolio if I think that I have multiples and multiples of upside. I'm willing to risk that and then I want to know how much I'm going to lose if I'm wrong because on some of these I'm going to be wrong but you know, so that's kind of how I think through that. I'll tell you that what I don't take the view is I think there are some geographic areas that I'm comfortable investing in and others I might not be comfortable investing in.

You know, you talked about some of the African names. I'm here. I understand that. They carry guns there I get it. I spent a lot of time throughout my career. The geographies and understanding the risk and reward of that and what the, you know, how much does that country rely on that certain mineral for the amount of revenue it brings in, what's the likelihood they're going to do something stupid and change the codes real quick, but it doesn't mean I say no right away. I don't sit there and say absolutely not, you know, I think there's some really very interesting values there. What's the price? I'm paying for the risk I'm taking.

► **SmithWeekly:** So moving on to some other topics, on the topic of jurisdiction, Mike, give us maybe two jurisdictions that you like right now as far as timing goes

► **Mike:** Well, you know, so that's an open-ended question so as you can tell I like talk about uranium. So look, I think everyone is focused, right now, the uranium world is focused on section 232 and you know, the uranium fuel buyers, they're focused on section 232 and the U.S., they buy about 30% of all the uranium in the world. So it's the marketplace and people want to know who do I have to buy my uranium from. So 232 will have some resolutions from Commerce in April and then from there 90 days for the President if Commerce recommends doing something, you know, the ask is for a quota of 25% to be bought from U.S. domestic source. So you've seen a lot of people anticipating that to happen. You know, that is something that starts to get priced into stocks. I've had a lot of experience over my

career looking at regulated industries and looking at governments. I did a lot of work in the for-profit education industry a couple of times in my career, a tremendous amount of work, and I understand that things happen. You can't assume one with enormous conviction because something is so obvious somebody's going to do something right now. I think it is very politically popular for the Commerce Department to recommend something be done. If I'm Wilbur Ross, I probably don't want, on my watch, to be the guy that, Nope, forget it, let this industry just disappear. Who knows right? The uranium mining industry is much smaller compared to the electric utility industry and electric utilities are fighting like crazy saying that we don't want this. The Russians, they've been great responsible suppliers, right? You go to the comment sections at Commerce, you can read this stuff and you know, okay I suppose but you know, I'm a big geopolitical junkie and we're in Cold War 2.0 and we have been for quite some time.

So you can make a really strong case for yeah the Kazakhs and the Russians have been great suppliers, but hey, let's not kid ourselves. It is a geopolitical tool for mother Russia energy. Does that mean 232 is a slam dunk? Nothing is a slam dunk because you don't know what takes place in the horse trading that takes place. My guess if I have to make a bet right so my guess is something gets negotiated, I am a betting man, something gets negotiated that lets everyone kind of save face that keeps the uranium miners going. It gives them life. It gives them some breath. The utilities can live with it right again I spoke at the NEI conference, I spoke to these fuel buyers back at the end of October 2018, I stood up there and I said now, I'm looking at a hundred fifty people who don't like me because they think that I'm telling the world whenever I speak about it that it doesn't matter these guys. It's nothing. It's only a few percent. They don't have real issues. That's not at all what I say. Andrea Jennetta, who runs fuel cycle week, the publication that is a weekly publication that most of the industry reads, She and I have become friendly but there was this tension in the air that I always felt and Andrea would write in her commentaries on dumb investors are in the room. We've seen this thing before and so after the conference I spoke with Andrea and we were chatting, we bumped into each other and she said well, why are you here? Why are you talking to these people you you're just a mouthpiece for the uranium miners. I said, what are you talking about? She said yeah, you're talking at all these fuel buyers about cost and all this stuff, but you're really just a mouthpiece for the miners. I said, wow, we've never really spoken before but you talk about two ships passing each other in the night and just like not knowing what's going on. I said, I'm a person who allocates capital to a mining industry. I'm the last person the miners really want to be talking to sometimes because you can't go out and play the pounds in the ground game with me. You can't go out and buy some bullshit pounds of uranium that will never see the light of day because you need to go out and raise money six months from now or three months from now and you need to have something good to tell people that's really not good. You bought stupid and you went out bought them so that yet you could go raise another \$2 million to keep your lights on but you add some debt to the balance sheet and these pounds are stupid pounds. Unfortunately for the last six, seven years you've been selling stock to retail investors who don't know what to look for unfortunately, but unfortunate and so you've been doing it to keep afloat and diluting the living daylight out of people.

So I was talking to her I said you think they want to be on the call because now here comes somebody who's a institutional investor that's holding their feet to the fire and not going to give them capital, is going to make them show discipline and is going to say you can't bring this online at 40 bucks a pound because oh by the way, you could be telling the world that your costs are 25 or 30 bucks a pound but I want to see, all I understand is all in sustaining costs. Now, let's go back and let's dive through your glossy presentation. Your cost is X but that's not the real cost to pull it out of the ground. Let's really dive through, you put in royalties in there, you add back G&A, putting a transportation cost in there? Let's really see what your costs are, your costs are much higher but during the depth of a bear market when you need to raise capital, you got to make yourself look good. Now it eventually shows up in the numbers somewhere. You can't hide

transportation or royalties, but when you're trying to say look, the markets have 23 or 25 or 28 or 30 bucks a pound, we have really great costs look at us.

Well, I'm still waiting to meet the first uranium miner that's not in the lowest quartile because they all say they're all in the lowest quartile, but the costs show up elsewhere on the P&L statement. So as I said to her, I said so you know you should be on the phone with me having some of these conversations and she laughed and we sat down and I said you got a minute? She said yeah. I said, well, you know, you want to see how I conclude all this stuff. She said sure. Well that lasted hours, we went into a little lobby at the hotel and I fired up my laptop. I said here you go, here's my model, here is everything it all flows into it. Here's primary mine supply, secondary supply, Japanese utilities, every country by reactor, let's do our underfeeding tab, here's the math and here's how it all flows into the main model, here are the costs of each project that's going to need to come online, and she said, wow, I didn't realize that. So you know it's an odd space.

So as I think about section 232 that's what the world is focused on right now. You've seen the spot prices rise. So I think the equities and some of the U.S. miners have worked in anticipation of that. You always have to think though what happens if something doesn't happen. Because nothing is a slam dunk. So how do you play the cycle? So that's part of it. Now what's kind of been ignored during that because the excitement right now is vanadium, another thing that people get, again, really excited about. I'll be clear, I'm in this for the uranium cycle. There is some vanadium as some of these mines have byproducts and it could change economics, but excuse me, I didn't sign up to have a vanadium fund but it can help on some of them. You just got understand what you're looking for. Really drill down and understand when you're looking at. These things, it's very common for companies to go chase hot commodities. It's to say, oh we have this and then the prices roll over and you got to be careful. So you gotta understand that stuff.

I think geography is interesting. I think what you've seen is if you stare at these stocks throughout the day and you look at them over a long period of time, you know, you've certainly seen the market not appreciate some of the really higher grade stuff that you would find up in Canada. You've seen some of the African assets just be completely ignored. So, you know, there are things depending on where you're trying to have a gauge to what the market psyche is. I see it's interesting now there's been a decoupling the last few months. You've seen spot price go up to 29 bucks and for the last few months the equities have, some of them, been pounded but what you could also see is some of the bigger names are hanging in there a little bit better. The more higher quality names that could tell you start to see some institutional bids starting to come into the space you're starting to see the interest change.

► **SmithWeekly:** Mike you've spent a lot of time looking around at these different jurisdictions and different folks in the industry and you've studied a number of them and come to conclusions about various things. So is there some names of some credible people that you've come to respect in the business that you want to share with us?

► **Mike:** You know, I've met all types. I've met some really incredible people. I've met some people I think are not credible. You know, you've had a guest on that I have a lot of respect for that I speak with and that I think gives some really good insight into the industry. I'm a big fan of Dustin Garrow who has been around probably 40 or so years. I think Dustin has seen a lot, he's seen it all, he understands the cycle, and he understands what's going on in the marketplace. So I'm a Dustin fan. I prefer not to say which CEOs that I hold in high regard

as it is just kind of my own personal preference not to say that. I'd rather not go into the company management and stuff like that, but yeah, you know Dustin is somebody that I have a lot of time for, yes.

► **SmithWeekly:** Absolutely. He's a good man and like you said, he's seen it all, he has consulting agreements with various companies, he's been on different continents, different projects and is a very interesting guy and certainly he's probably forgotten more than we could ever learn. Yep, whether it's the engineers, the geologists, I'm a sponge, you know, and I like guys who have worked in the industry 20, 30, 40 years. Moving over to Separative Work Units, SWU as we like to say it in short, where do you see SWU prices going in 2019-2020?

► **Mike:** Well, you know, it's something that kind of, you know, I'll go back to when I started speaking publicly about this. It was something you weren't seeing people talk a heck of a lot about with secondary supply which didn't make sense to me because it was, you know, underfeeding, which takes place at the enrichment process. You had a lot of excess capacity of separative work units at the time, you know, from the financial crisis, had some demand came off, Japan went offline, that whole thing, more came off. Everyone knows that story but you had excess capacity and you know the SWU price was in the high \$100s, you know, \$180-190 and as you started to see it fall and fall and fall and fall and fall down to, it was going into the low \$30s at one point and you know enrichment plants are in the business of enriching uranium. That's how they make their money. Underfeeding is just something they do that can bring out some extra enriched uranium product and selling to the market. But at one point, you know, that was upwards in the mid twenty millions of pounds that it was adding to the market. When you start to look at what goes into some of the stuff and you look at where you start to run into design limitations of the centrifuges, you know, the Western centrifuges can go down to optimal tails about 0.18 and the Russian Center Futures can spin optimal tail assays down to about 0.1 and when you blend those two in the market share of Tenex, Orano and the Western guys, you know, combined, the Russians had half the market, you start to get into an optimal tails like 0.15 and that's where we are at right now for the industry. We started to look awhile back and say well we're starting to see SWU settle in here at the high \$30s. Really at those levels we felt as though that the enrichers weren't really making money at \$35, 37, 38 dollars. We knew excess inventories were being drawn down and working the way through the fuel cycle and you know, you start to see Converdyn, the converter, they put the conversion market into deficit which resulted in conversion price is doubling and you've started to see higher uranium prices.

So when you add higher uranium prices and higher conversion prices that equals higher UF6 prices and you know one of the last major stops is SWU, for the utilities, the contracts are rolling off, they have to sign contracts for SWU just like the miners do for Uranium. So as these order books are rolling off, they're not excited to go out and sell \$38 \$40 SWU when they were getting well over a hundred bucks for their separative work units in the past. So from a design limitation standpoint, from order books rolling off, they're not going to go sign contracts there. Our view has been that SWU will start to move higher and I think you're going to start to see it move higher throughout 2019 and 2020 is what you're going to start to see. Enrichers are in the business of enriching not underfeeding they make much more money enriching uranium and selling it at those prices. They want to be running capacity for primary utility contracts, that's what they want to be doing.

So as we think about it, you know, and at the NEI conference, Orano and Tenex started talking about it and they basically said look we're working down our excess we're not as high as the market believes. They said as UF6 and SWU prices change the optimal tails are going to change too. One of them said we're only really underfeeding to the extent that we fund some internal research and development. It's not

our core business and they had done a consensus view of the room beforehand and they had polled people and 90% of the room thought there was all this excess out there. I am of the view that underfeeding in 2019 and 2020 the amount of pounds that hit the market will start to materially decrease and I told a few buyers that, when I spoke to them afterwards, you know, they're not disagreeing.

► **SmithWeekly:** Very well, I appreciate the comments and the views on that. Speaking on the same subject. Maybe you can share some views on this one because it's a really odd one, but Centrus Energy is a listed company, used to be USEC. What's your thoughts on this company?

► **Mike:** They're really a SWU broker right now. So they have done work with the government for newer generation technology for enriching but the U.S. does not have any of its own enrichment capability at this point. This relates to 232 because on the grounds of national security, you know, the U.S. miners are going to go out of business. Okay, well, that's cool. Well Centrus used to run the gaseous diffusion plants and those have been closed for years now. So the only enrichment, which is the important part of the fuel cycle, uranium out of the ground can't power anything, well it can for the Candu reactors but there's only a handful of those, so you really need enriched uranium for the bulk of the reactors around the world. So when you start thinking about who in the U.S., the only live enrichment is in New Mexico that's owned by Orano, which is a European conglomerate.

So we don't own it and Centrus came out of chapter 11 as part of that USEC thing and with the Department of Energy, they developed a centrifuge technology, which is known as the AC100. So the AC100 is a really pretty cool centrifuge technology. Now to build one of those, there was a report in 2015, they estimated that the cost of the plant fully equipped with the required AC100 centrifuges would be 3 to 5 billion dollars to build but if they delayed construction to like 2022, it could swell to like 11 billion dollars. Well, it's not being constructed right now. The interesting part of that was an AC100 plant was just to meet defense needs because that was because you got to separate defense, legislatively, from commercial needs. So if you were to do that, the estimate at the time was to meet the defense needs they would produce low-enriched uranium at costs much much higher than the past highs of SWU. If you think about the historical market price of SWU over time is probably about a hundred bucks plus, these guys costs would be much higher but it would be done for government purposes. Back to Centrus, I don't own it and I have no skin in the game on it, nothing at all. It's just really right now they are a SWU broker. Could they be in the mix should enrichment become a deal again in the U.S., yes. You know the Oak Ridge Lab also has a separate enrichment technology that uses smaller centrifuges but they are in a similar boat to the AC100.

► **SmithWeekly:** It's certainly an odd duck that particular business and their bonds in the market, even watching what the stock does so it's interesting. What's your thought on Lightbridge fuel technology and do they have a fighting chance to get their fuel to commercial reactors on a wide scale basis?

► **Mike:** They're just, unfortunately, they just keep disappointing investors. Again another one I don't own but I'm aware of it. I follow it. One of the research reactors they were testing in wound up closing and they were just going for a research grant to get some money from the DOE. The theory being it burns at much lower heat rate so that you can avoid a meltdown type of thing. You could avoid having some of the backup systems that you need which could lower the costs. They've had the big four utilities in the U.S. have supported them. They also have their Framatome agreement, which is with Orano. I don't want to say, I think the timeline is much more. I think investors were

disappointed when they announced their JV with the French back earlier in the year that it would lead to all sorts of stuff and financial commitments and it really didn't, but it did give them access to technology and now I think people are looking for more of a financial commitment.

► **SmithWeekly:** Yeah, absolutely and just from the technology side, it's interesting to see how that plays out, new fuels by multiple companies, Westinghouse too, the SMRs, etc. I think the SMRs have a promising future. So on another topic give us your secret sauce to your approach to evaluating a uranium explorer, producer, and a developer. How do you look at these from both a risk perspective, downside, of course, and how do you measure the potential upside, give us some points here.

► **Mike:** Sure. It just goes back to right sizing, like am I going to have a 1 or 2% position where I think it's, they have a large land package in Athabasca, in the neighborhood of where there's been some other projects that have been successful but they're still very early stage and they have some smart people who have proven success in exploration and there are some reasonable opportunities that can be something, so really early stage. You know, I want understand like neighborhood location, geography, have they done it before, and that type of stuff. Those are smaller positions. When I'm looking at a bigger project, I don't look at these things say, oh look per pound in the ground we're 40 cents, were cheap. We're 60 cents and peer group is \$2, meaningless to me, in-situ value is meaningless to me. I want to know, well, okay, you've got all these pounds in the ground.

If you go back to what I said earlier a lot of these guys bought pounds just to go out and raise money and to have news to tell the market you want to understand so I look at the project. What is the project? I read the economic assessments, pre-feasibility studies, etc. I'm going to look at the assumptions that went into those. I'm going to run those by people I trust, that understand this, and see if they're reasonable, see if the geology is reasonable. I want to understand the costs. How dated is the study? What has been the mining inflation that goes into it. That's something to think about as you think about the cost of many of these future projects that are out there that have known resources in the ground. Have they measured and indicated the resources. When was that feasibility study done? Are they going to have to be competing with drill rigs that are being used for shale plays right now? If you're in the U.S. and you have a project that could come online, well, you're going to be out there competing for drill rigs against guys who are in shale plays and that's a meaningful cost. Are you going to be able to get the labor out there to do this? So it's really piece-by-piece going through the feasibility studies, going through the pre economic assessments and then I want to understand are there byproducts associated with that? What is the building cost? If I'm looking at the economics, let's say somebody that needs to do a toll milling agreement. I want to know the cost per tonne to mine it, the cost per tonne to toll mill it, the cost per tonne for G&A at the project, the cost per tonne for transportation and I want to understand if those make sense. How many miles is it from where they're going to be shipping? Does that transportation cost make sense? Is it reasonable, are those mining and milling costs in line with what others might have? Is there anything that stands out that would make that unusual, are those assumptions too aggressive or are they too conservative? That type of stuff.

► **SmithWeekly:** Yeah, absolutely and certainly for us to cash flow that project. What's the cash flow? You have to look at a lot. You have to look at the G&A. How responsible are they on that side is management funding their personal lifestyle and just mining the shareholders? You have to look at those things. What is the shareholder structure? Do the Chinese own it? What are the royalties?

► **Mike:** Is it a Department of Energy lease where the royalties in the U.S. could be 20, 25, 30%. Is it a Bureau of Land Management lease where you know you're not paying a royalty but paying the maintenance fee each year. Is there a royalty attached to it? When you're looking at all these reports right under understanding the structure is something that I think people need to spend a lot of time on. You really need to understand what you're looking at when you're looking at cost. Is it a C1 cost, operating costs? That's the direct cost that includes blasting, mining, drilling, the hauling, the Milling, the processing, does it include freight and marketing? Because you paint all those costs, are they showing you the total production cost. Are they showing you an all in sustaining cost which is your C1 and now you're adding sustaining capital expenditures which it could be significant for all of that development that needs to be done every year and you want to get a fully allocated costs. Does it include future project exploration? Does it include the indirect cost in the overheads, taxes, interest charges, loan repayments, etc. You got to understand what you're looking at with all this stuff.

► **SmithWeekly:** Yeah, you have to look at the infrastructure. What's it take to get are your bringing in power lines, using onsite plants, etc. Are you in some remote place in Canada, Alaska, Africa? What's the red tape costs? What about the Sovereign Nations? Do you have a huge community outreach cost? You have so many of these indirect costs that nobody really thinks about. How're we going to get to that \$1.3 billion? There's a lot of inputs to it so, yes, it's interesting, you know investors and speculators alike need to take a hard look at all of the aspects related to these companies before they even give them a dime. Have a hard look at it and then proceed with caution. Good points you brought up, Mike. So you've given credit many times to your in-house uranium model. With your model and current factors in play and also some of the changes that have happened in the last couple months, when do you realistically see severe price upside in uranium to occur?

► **Mike:** I think when 232 clears, whatever the outcome, is known. I think you'll start to see utility start contracting at a very meaningful pace and I think they're going to be paying much higher prices for the uranium on term contracts. I think the market, Andrew, is ridiculously under followed and for me it's the biggest disconnect between price and value fundamentals. The supply destruction that is taking place, the new projects that will not come online, and they're getting delayed, and you could say by 2020 a third of the utilities don't have their uranium contracted. It just falls precipitously. These projects are not coming back online, you know, a standard for comment I hear is well at 40 bucks it's going to start flooding. I laugh at that because it tells me people haven't done the work. You've got all these closed projects and production winding down to closure. The Chinese just bought Rossing and so they're going to use that uranium for themselves. It only gets more challenging at McArthur. It's more expensive. I don't think you see McArthur River come online to you're well into the \$50-60 uranium because of cost factors there. The Kazakhs, you know, they've dramatically under spent over the years on their capital expenditures. Most of that is in-situ which has a very big depletion curve that has capex along the way. So I think that it goes the other way, declining production for years.

I think about the utilities, they're smart. These are not dumb people. They have had a perfect storm where they have not had to go out and enter into long-term contracts because of the structure of the market and I think that gets so overlooked by those giving a cursory look to the market. After Fukushima and demand was slack obviously and you started to see these contracts roll off. If you go back and look at utilities and when they were buying they were buying long-term contracting at the peak that's because they were worried about supply and so you saw the volume of long-term contracting go parabolic then they rolled off and stopped. The miners should be ashamed of themselves.

They were increasing production throughout this downturn because they assumed Japan would come back online quicker than it did. I don't think they calculated underfeeding to the extent that it occurred in their views. So they were increasing production every year increasing capital expenditures, which was crazy. They were looking at the end of the megatons to megawatts program. So they looked at that and said, well this is coming to an end so we're good. The contracts will roll off and they'll enter into new higher prices. But then the DOE started selling uranium into the market to the tune of seven million pounds a year and underfeeding was really accelerating. Then you have investment banks bring along the carry trade with shorter duration contracts. So the utilities said, okay, well that makes sense. You mean we don't have to commit. Yeah, you know, demand is kind of weak and there's a lot of excess supply. So let's just hang out in the market for a while and that kept happening and happening and happening. Then some of the traders got cute and they went out and, rather than going out and covering their own needs, onto those contracts, they stepped out of the market. We'll sell you 5 million pounds a year, but we might not go secure that five million pounds. So you start to develop a short position there and then things change. So anyway when does it start to turn. Look I think based on my model I think that you are in the tens of millions of pounds deficit for the next several years. So I think that one section 232 clears the utilities to start to come into the market and I think you start to see pricing long-term contracts start getting signed at much higher prices.

► **SmithWeekly:** Right and just a couple of follow-up quick question, quick answers here as we get through the topics. So for us the key catalyst at this point is the 232 outcome and then the obvious elephant in the room catalyst is the long-term contracting. So those are the two catalysts we see. Looking at your model just briefly maybe you can give us a little bit more information. Do you have a count of how many contracts by year, by country, come off and the rough of volume that needs to be re-contracted by the year?

► **Mike:** Well, I do. Am I going to share it with you, No. I think what I'll say is a third of their needs for 2020 aren't under contract. So it ranges 30 to 35% you could get comfortable in that number and you could do that by looking out annually. Well, no, it accelerates from there because the waterfall keeps escalating and as you get into in 2025, you know, you're pushing north, 60% uncovered as you start to get to 2023, 2024, 2025 and you got to remember this is a time period where no new projects are being developed. At the Nuclear Energy Institute conference I had a slide, 30 some-odd projects that I put up there that show the feasibility studies that require at least a minimum of \$50, and they're full of shit. These projects need \$60-70 uranium to come online. That's going to fill the void and so that you know consensus view is like I said, it comes back online at \$40, nonsense.

I think it needs at least \$50, maybe, and then you start staring out into 2027 and Cigar Lake runs out, you know, 18 million pounds a year, that's gone. So what's the big beautiful project out there, world-class Nexgen Arrow. That can put it in the mid twenties, maybe a little bit higher, per pound. These are responsible real sharp guys that their project is based on \$50 uranium. They have \$11 costs on an all-in basis. But first of all, you don't know when the project will actually get permitted and built. So maybe some will say 2023, 2024, 2025, 2026, 2027, there's all this speculation as to how long the permits will take. Who knows, but then you got Cigar Lake coming off line and when you're talking a year or two difference here in the world of uranium moves in dog years, that's how long it takes to get this stuff done. These guys aren't going to flood the market and hurt themselves. I think that you are at the cusp of severe supply deficits and now, a third not having their needs covered. I think that only just escalates traumatically from here.

▶ **SmithWeekly:** Thanks for sharing your thoughts. We wanted to ask and it's a very interesting piece of information. A lot of effort. Moving on you've probably done more work on secondary supply on the investor side of things. What is your view on underfeeding in the years ahead and when would it be attractive for underfeeding to return in a big way?

▶ **Mike:** It's not. It's never attractive for them to underfeed. It's a survival technique. It's a cash generating technique. It won't as demand picks up. They're going to be enriching and not underfeeding so it doesn't become attractive for them. They don't sit around and say we want to underfeed they sit around and say, okay, well shit, let's underfeed because we're going to generate, with this excess capacity, some cash flow from it.

▶ **SmithWeekly:** Ok. It's good to make sure people understand that. I think some people are confused as to this how secondary supply sources work and specifically how underfeeding works.

▶ **Mike:** Obviously high prices set in a bunch of other issues that come along when you know uranium is at unsustainable high levels. So will a recycling of depleted or used uranium be a potential secondary supply source. There's a pretty steady amount that comes into the market every year, you know, you can see if you want, you could pencil in between five and ten million pounds. That's pretty steady. It gets very expensive to do that so that's a pretty steady consistent. So no, it's not something I would expect.

▶ **SmithWeekly:** If the Japanese have been honoring their long-term contracts for uranium post Fukushima, wouldn't the Japanese restarts be irrelevant from a demand perspective over the next four to five years?

▶ **Mike:** I think that with \$29 uranium that's well priced and we've moved past that. They're commentators out there that say well, it's still the Japanese restarts. Come on. Japan has a hundred and ten million pounds by accident. How much of that is fabricated fuel? There's a big chunk that is fabricated fuel, probably half of that. It's not mobile. You can't use it in different reactors. So really, you know, you look at mobile inventories and what's mobile inventories, uranium, UF6, SWU. They're up and running, you got eight utilities that are not running that have some inventory but the ones that are up and running I think you can see come back into the market. Somebody wants to do a really fun exercise go back to 2000 and model out, in process, fuel for reactors. Look at the Japanese balance sheets of the utilities, which is what we did going back all the way and you'll see periods of time where inventories are in the 10, 15, 18 years. So, you know, it's another number that people just talk out their ass when they're talking about Japanese inventories saying, well, they have all this inventory. Okay, we'll go back and look historically and see how much they keep around because they don't produce any uranium in Japan and so see how much there is. I think that Japanese restarts they help, we factor in a few every year. I mean, it doesn't matter, you know using half a million pounds or 450,000 pounds for a reactor per year. So if they come online or not we still think tens of millions of pounds of deficit. This isn't going to matter.

▶ **SmithWeekly:** Well put. We tend to have that same agreement with you. Japan is an island nation and they've had a historic record of keeping plenty of stockpiles.

▶ **Mike:** Right. Looking at the Chinese, we went back and looked at from how much they bought, how much they used, and how much is coming online over the next several years from the reactors and under construction. What's a reasonable amount of uranium that they're going to keep around. It's not five, seven, eight years. It's more than that. If they were to just draw down from what they have right now just over the next five or six years you'd be down to a couple of years, three years worth of inventory. They will never let themselves get in that position. They were never going to be dependent on anyone else. So we think they're in the market buying 20 plus million pounds a year. They have this Husab mine in Namibia which they bought back in 2014. The world thinks they're producing 15 million pounds of uranium per year. They're lucky to produce a couple of million pounds. They'll never do the 15 million pounds capacity at nameplate. I don't think they ever produce more than seven, eight million pounds a year from that and so they went out and bought the Rossing mine. It has some other zones that they could go out into but it is largely depleted out. So we already kind of covered this but I want to reconfirm the closing of U.S. reactors and the planned closings. It has no impact on this cycle.

So we take out a number of reactors throughout our forecast period, you know, check and we do that right so we do it by reactor and those who have seen my model know that it's you know, we're very comfortable. Like I said, we went conservative on France and our forecast period you know, the France came out and said by 2035, they'll get down to 50% dependency on nuclear power down from 75%. So factor that in. I don't have my model open, but it's from memory. It's 18 reactors. We got the U.S. reactors coming off. Obviously I'm sure you do to, being a public person on this space, you know, I'll get email saying, oh look this reactor is closing. Ah-ha, Okay. Thanks Pal. You got me. Holy cow didn't think of that one! So yeah, those are in there. Come on.

▶ **SmithWeekly:** Yes. France and 2035, that's what they said a few weeks ago. Wait til the protests are done. They're protesting because of high fuel costs and energy costs now. Yeah, good luck with that.

▶ **Mike:** We did the same thing on South Korea because President Moon doesn't like nuclear power. We took a bunch of those out too. They're not going to do that. But we took him out.

▶ **SmithWeekly:** Yeah, he doesn't like a lot of things but looks like he's coming back around even with the North. So I think that'll change. Taiwan certainly questionable and with the current administration in the states and with some of the recent state actions to prop up a number of reactors. That's something.

▶ **Mike:** It is. We take U.S. reactors out but I don't think a lot of those will close because I think they'll get the state support and interestingly enough, pretty funny, natural gas has been two and a half bucks forever all of a sudden it's four and a half bucks. I know the shale plays are pumping it out like there's no tomorrow, but imagine, just imagine if natural gas was actually a natural resource because apparently it's not because people assume it's \$2.50 forever and assume those recovery rates are really as good as the shale players say they are, imagine if there was something that just caused natural gas to spike up to the five and a half, six dollars, all of a sudden at 70-80 percent of the cost of running those new natural gas plants. All of a sudden that gets flipped on its head and that's right talk about when it comes to that and the only place that nuclear plants are getting shut down in the states with absolute certainty is the crazy State of California. Well, yeah, and also where you have competitive markets and regulated markets. Look they go to the Public Utility Commission and they get their relief. They go to PUC and they get increases and you know it'll cost the rate payer a little bit more but it in competitive markets where they're competing with natural gas it's hard, but you're seeing the states step in and try to help them.

▶ **SmithWeekly:** Yes, absolutely and it's positive and I think the sentiment is starting to turn there and I don't see it going back the other way at this point. Moving on is Cameco the only producer that is buying on the spot market or are there other producers that are getting in on the spot purchases at this point?

▶ **Mike:** The meaningful ones are. I mean I think Peninsula bought a drop for what they're doing, but they are really minimal in terms of the smaller producers.

▶ **SmithWeekly:** Okay Mike. So for the folks who really don't know very much about this supply chain or chain of custody that happens, give the audience a complete chain of custody ownership from the mine to the reactor.

▶ **Mike:** The utilities like to contract at each stage of the fuel cycle. So they like to contract with the miner, contract with the converter, contract with the enricher, and contract with the fabricator. They like to control all that. So the way it works is they pull uranium out of the ground. They mill it, process it, and they turn it into yellowcake, dry it out, they put it into drums and then send to a conversion plant where it gets turned into UF₆, which again, gaseous state, and then from there it gets into an enrichment plant where it gets enriched. So it's not fizzle when it comes out of the ground so they enrich it for nuclear power. It's typically three to five percent and then for weaponry, it's above 85-90 percent for it to be used in a nuclear bomb. Most of the uranium that comes out of the ground is used for nuclear power and some for Weaponry then some for medical needs and stuff like that. Then from there it gets sent off to a fabricator that that fabricates and puts it into fuel rods. It gets fabricated and then sent off to the reactor. That cycle can take 18 months can take a little bit less or a little bit more.

▶ **SmithWeekly:** Right and so for the beginners out there and the unknowing public, again, this stuff coming out of the ground is not dangerous. It's not going to melt your eyeballs. It doesn't mean a nuclear bomb goes off in Florida at a reactor because a hurricane hits the power plant. That is not how it works.

▶ **Mike:** Exactly. You're getting as much radioactivity on a six-hour flight from New York to L.A.

▶ **SmithWeekly:** Absolutely, go out, especially in some of these countries closer to the equator come out here and stand out here in the sun. That's your dosage. Don't be talking on your cellphone too long because the radiation might be too much. So you got to put it into perspective. So Mike switching gears regarding the big broad market, how do you see uranium equities holding up under a broad market bear and how likely are we to see this scenario come during this uranium cycle?

▶ **Mike:** Yeah, you know, I think that will depend on where you are in the fundamentals, right if today 232 is happening, 232 is cleared up today and contracting started. The fundamentals would far Trump what's going on in the overall market, doesn't mean some wouldn't get hit. You see it now in the last couple of months October/November the markets been choppy the crappy little junior miners and I say crappy meaning these things trade twenty, thirty, forty thousand dollars a day, you know, Bob sitting on his couch in Manitoba who wants to sell some stock because he wants to do something can move the stock down 10% and if the market's getting hammered some of these are in these indexes you see them get sold and when there's risk off, you know miners they're going to get hammered too. So yeah, you've seen some of that take place over the last couple of months, but I think as the cycle keeps wearing on and as the fundamentals and 232 being that big guidepost there. If it is negative it's going to hurt the U.S. miners a little bit, those stocks are going to get hit, but then again if you step back and look at the supply, demand, and deficit, I think they're going to do fine too because you're going to need all the uranium you can get. Sentiment is why you might hurt them but as you start to see a fifty dollar contract signed, I think you're going to see sentiment change pretty quickly.

▶ **SmithWeekly:** Yeah, it'll be interesting to see how this one plays out because you kind of got a couple different points of research. The kind of double pump that happened in the last uranium cycle. The financial crisis knocked it down and then it went up again. So you had a double pump and then if you look at 2001-2002 sentiment during that bear cycle versus the 2008 crash, you can go back and look at a chart of Cameco in 2001-2002 and how it responded to the broad market, very interesting how natural resources responded back then you know, and it's like interesting the market's always searching out a bull market and if the fundamentals are warranted I think you're going to see a bull market occur. Comparing to the last cycle, you've seen this, you saw the fundamentals back then, you've researched them this time. Are the fundamentals this time the same, are they worse, or are they better?

▶ **Mike:** So dramatically better it's not even close. In the last cycle, you had twenty three reactors starting under construction and 20-30 million pounds in new supply coming online. In this cycle you got 56 today under construction and there's no new mine supply. You had Salamanca, Spain that could have come online at \$40 and now you've got the government and all the negativity there with not granting all the permits that they need. Then after you have these pre feasibility studies and these bankable feasibility studies that are out there. They need \$50, 60, 70 uranium for anything to get started. Then you've got the under feeders, you've got the enrichers not making money, their inventories are tightening, secondary supply declining rapidly, U.S. Department of Energy pulled off the uranium from the market, halted their selling. So I think it's a much better backdrop.

▶ **SmithWeekly:** Yeah, be careful with those countries that have an interesting sentiment, significantly perverted government, and also with that look out for the places that don't have the uranium framework, has the country ever exported before, that's a big question.

▶ **Mike:** Yep. Absolutely.

▶ **SmithWeekly:** So there has been a recent, you know, trend of delaying shutdowns in place. Like we just discussed, you know, France, Taiwan, even in the U.S., like we've discussed and even now starting to pick up in Germany. So how does the Mike Alkin model look and how does this supply-demand situation look now over the next decade?

▶ **Mike:** I keep the closures in because like I said, we're in the tens of millions of pounds starting 2020ish. We're in deficit now, I believe, and it starts to get worse. You got to remember a reactor uses 450-500 thousand pounds a year. So I keep them in the model just to be conservative. That's fine, it would only get worse and that's, I think, one of the things that is a big misunderstanding. There's not enough mine supply to meet the tidal wave that's coming and that's kind of how we view it.

▶ **SmithWeekly:** Right, people try and split hairs and I think lose sight of the bigger picture.

▶ **Mike:** Absolutely.

▶ **SmithWeekly:** So what is happening in the spot market, there was a lot of volume this year, where is it coming from and do you see kind of the same volume levels in 2019 in the spot market and if so, how will the price react in 2019?

▶ **Mike:** I mean look you got buying from a variety of players. You've seen new entities enter the market that have come in the summer, you know, you've got the publicly traded Yellowcake, PLC. You've got private investors. I mean, I know some large investors that are buying physical uranium, you've got some producers, you know, obviously Cameco was in there. Then you've got, you know, the physical traders who trade in the mid term market and you know generate some spot volumes as they cover and then you know utilities poke around a little bit but you know, it's these entities that are coming into the market that are also sopping it up.

▶ **SmithWeekly:** Right. With the various uranium holding funds accumulating supply and with a large production potentially entering into the market above \$50 per pound. Do you see demand being satisfied around these levels and will these funds start to monetize a little bit of their holdings?

▶ **Mike:** Now, how do I know? I don't think so. I think it's going to come down to going back to what I said earlier people assume the restarts, people assume the Kazakhs can pump out all they wanted at 40 bucks because they have lower costs. I'll go back, the Kazakhs floated 15% of the company public, a third of it was bought by the pension plan of Kazakhstan, other related interested parties received a chunk of stock and now they're going to float another 10%. They're public now. I think people are working off the premise that you get this flood of uranium coming into the market. Like I said, I don't think the Kazakhs produce nearly as much as people anticipate. I think you're well into the 50s before new projects are coming online. So no, I don't think so. There's this mental guidepost that people have in their mind and I think it's just because that's where people look. Where's their contract book? You know, these companies have been decimated. Look at how much capex the Kazakhs delayed over the last several years that they've got to spend because in-situ mining has big depletion curves and they've not been spending. There's this view that everything is going to come back online at \$40. Okay, well that's great have another beer, sit down, and assume you know the uranium world because that's kind of where you think it's going to come back on.

▶ **SmithWeekly:** What indicators do you look for when it's time to close uranium investments? That's the hardest part.

▶ **Mike:** The hardest question I get asked is if my thesis is right. Again, I could be wrong. If my thesis is right the hardest part is when do you sell and that is where if the thesis is right, obviously as an analyst, I'm looking at valuation, but I've often seen things go way to extremes, people get way too excited on the upside and way too pessimistic on a downside. So I think you have to step back and say okay, what do I own? What's this thing worth? What would a reasonable buyer pay for these assets? What's the reasonable multiple an investor would pay based on the cash flow? What's a reasonable multiple an investor would pay for an acquisition if that's how you're thinking about it and then when the animal spirits are out step aside and let the market take it over and just when you feel like it's starting to get a little goofy because it hasn't rained. If you're looking at the supply demand dynamics and it's originally what you thought it would be and you're kind of there, that's where the art comes in, you know. Nobody ever went broke taking profits, bulls and bears make money, pigs get slaughtered. It's your own personal feel.

- ▶ **SmithWeekly:** So some folks were interested in knowing if it was possible that when you're doing certain interviews and stuff at conferences, talking to kind of industry key people, would you be willing to offer up some of these kind of raw discussion audios?
- ▶ **Mike:** I have no interest in doing this. I'm not selling uranium research. I'm not looking to monetize it. At certain times, again, that's my proprietary stuff. I have my own uranium fund and that's for my own consumption. I'm happy to share my insights from it, but like a seat at the table, leave that to some newsletter writer. I want no part of it.
- ▶ **SmithWeekly:** Well said. So how can potential investors reach out to you and Sachem Cove?
- ▶ **Mike:** Well first they have to be accredited and we have a website, my partner in the business handles any of the inbound inquiries. Probably just reach out to him on the website and he'll get back to you.
- ▶ **SmithWeekly:** Okay, very well and of course, we know that Sachem Cove has a Twitter account. Google search and you can find Sachem Cove quite easily or just check out Mike's account on Twitter. Mike, we appreciate it, good times, and good luck as we get underway.
- ▶ **Mike:** I enjoyed it. Thank you very much. It was great chatting.

For more information about Mike Alkin and Sachem Cove Partners, visit:

www.SACHEMCOVEPARTNERS.com



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