

EPISODE 1410

[INTRODUCTION]

Whitney Sewell:

The comments, opinions, expressed in the podcast are those of Ms. Cranley alone and are intended for educational purposes only.

[INTERVIEW]

Whitney Sewell:

Kristine, welcome back to this show. Honored again to have you three days now, and us just dive into what in the world is Bitcoin.

What does that mean for us as real estate investors you shared yesterday, even some things through what might happen, how some of this technology might help us in the future as real estate investors? But there's this other thing that people are talking about that I've mentioned yesterday, but I've received numerous emails of offerings to invest in this thing called Bitcoin mining. You know what I'm like? Well, you know, I've heard people say, well, is that Bitcoin? Is that technology? Is that a computer software? What in the world is that, right?

And so welcome back to the show today. Let's jump into what is Bitcoin mining.

Kristine Cranley:

Thank you. Thank you so much for having me back. I love talking about this.

And Bitcoin mining is actually one of my favorite topics. And full disclosure, our firm is invested in it. Ourselves, and there's a lot of advantages to investing in the infrastructure over just buying the assets. I think there's pros and cons to both. I personally appreciate both and think it's good to consider. Yeah.

I'd love to talk a little bit about what to look at when you're thinking about investing in Bitcoin mining. But before we do that, let's take a step back and talk about what is it, what are we talking about here? We're not digging in the ground, right?

I heard a story of some company that went to West Virginia and they said they wanted to do Bitcoin mining there. And they said, how do you know you have it in the ground here? So it's kinda a funny name. And I think the reason they named it that way is in reference to the whole idea of Bitcoin being a, a gold 2.0, but really what's happening is you have computers and you can consider them digital accountants, let's say, and they're competing to solve the puzzle that will make the new block fit right into the chain and add transactions to the blockchain. And at the risk of boring you a little bit, I'm gonna tell you a little bit more about how that technology works, just so you understand it. And then we can talk about how to judge mining endeavors.

So what's happening is those computers are using a cryptographic hashing algorithm. You can think of it like a blender. Is it where you put in information and it shakes it all up? I like to give an example, a hashing algorithm you could think of. I don't know if you ever played with pig Latin when you were a kid, right? So I pay at and leg. Yes. I know what you're talking. It's like a hashing algorithm, right? So you take a phrase and you mix it up. But with pig Latin, you can go backwards. So you know what I'm saying? Cuz you can do the reverse.

Well, Bitcoin uses a cryptographic hashing formula created by the NSA called Shaw 256. And you could put any information into this hashing algorithm. And out will pop a 64-character alpha numeric output. So 837B96, and you can hash anything. You could take Shakespeare's complete works. Hash it and out will come a 64-character alpha numeric output. And it'll be the same every time if you don't change anything. But if you change one space, then it's gonna be a completely different output and you can't go backwards. You can say, well, clearly that shakes yours complete works minus one space. Right? So there's no going backwards. And so that is how the Bitcoin network secures the network.

And so what those mining computers are doing is it's gathering up, there's all these proposed transactions. Pick me, pick me, pick me, add me into the block. So they're in the memory pool, the memory pool, and they're waiting to be chosen to be put into the blockchain. So the mining computers are grabbing those up and then they are adding, what's called a nonce. Number used only once. And so they are adding that to that group of transaction and they're hashing it and then the Bitcoin network makes it so that what's gonna make that output that 64 character output fit right, is it's gonna have to be below a certain numeric value. So it's gotta start with 0, 0, 0 something.

So this is again the genius of the program. So if you have just a few people competing, the system adjusts cuz it only wants bitcoin to be created every 10 minutes, approximately. So it's gonna make it easier to guess if there's only a few people mining. Now, if there's a whole bunch of people mining, they're gonna make it a lot harder to guess. So every two weeks the system adjusts the difficulty, so that it's still happening only once every 10. So that we have our cap supply, so that in 2140, we won't be mining anymore because every 10 minutes, approximately we're getting a new block on the blockchain. So that's what the computers are doing. They're gathering of transactions, hashing with a number used only once looking for something that starts with 0, 0, 0 something. And if anyone were to ever go back and try and change the blockchain, they would not have that start with 0 0, 0 red flashing alert. Someone's messing with the system. This is an invalid chain. We ignore that.

So that's the beauty of the Bitcoin network and how it works. So when those computers win the puzzle, they get two rewards. They get the transaction fees in that clump and that'll continue after there's no more Bitcoin to be mined. And then they get the new Bitcoin. And we talked about that. So with every new block, there's new released every four years that's cut in half and then the miners can sell that. And that's called proof of work. So they're working to earn those Bitcoin. Now, the miners are incentivized to find the cheapest energy so that their cost for mining Bitcoin is the lowest. So whatever that is, wind solar, hydroelectric dams, waterfall. Volcanoes El Salvador is mining with volcanoes and they're selling volcano bonds, but whoever has the cheapest power wins.

And also, Bitcoin mining will naturally move toward friendly regulatory jurisdictions. It's a living system that goes like water. It goes in search of the cheapest energy and the most friendly jurisdiction.

My company, we are invested in stranded, natural gas bitcoin mining. We believe that it is the cheapest because when you drill for oil, natural gas comes up as a waste product as a byproduct. And that natural gas, you have to have a plan to get rid of it within 18 months or else in Texas, or else you can't drill for oil. As a matter of fact, just recently, they passed this inflation reduction act and I think there's 6.5 billion earmarked in that to reducing methane emissions. Well, that's what stranded natural gas Bitcoin mining does is it goes out to the oil fields and it finds this natural gas that would otherwise be vented, which I think is even illegal in Texas just put back into the environment or flared.

Do you see those big flames in the oil fields? What are they doing? They're flaring it because it's a waste product.

And so the company that we invest with, they go out there and they take generators. And they transformed that natural gas into power with which to mine, the Bitcoin. And so it's really neat that we were one of the first investors with giga energy, weed around about who the best stranded natural gas, both point miners were in Texas. And we were pointed to these young men. Who, one of them comes from an oil and gas background and they call it a wild cadding family. And it's kind of a neat story because these little towns in Texas are getting revitalized, cuz you're bringing, you know, you're kind of revitalizing the oil fields who need the Bitcoin miners in many ways. Like sometimes they are the ones that are helping like. Offset the cost of the compressor, getting the gas outta the ground. And so anyway, I can talk about it forever, but it's exciting because the point is that you're searching for the cheapest, natural gas that you can find.

And so in some of these situations where the oil fields have to get rid of it and may even be incentivized to get rid of it, you can get it at pretty low cost, but it doesn't matter whether it's a waterfall or a volcano, the ingenuity pioneering land for whatever you can figure out to get power in order to compete and produce the Bitcoin.

Whitney Sewell:

It's interesting. I didn't know so much about Bitcoin mining, right. I was just thinking through, as we think about investing in something like that, and maybe some of the benefits of investing in a mining infrastructure or just over purchasing Bitcoin, maybe break that down a little bit more.

Kristine Cranley:

Absolutely a lot of it does depend on where we're at in the market, because what's the price of Bitcoin at, and what's the price of mining.

Oftentimes when Bitcoin is going up, people rush into Bitcoin mining and they think they're gonna get so rich. And so they don't look at a lot of the fundamentals and they get really burned.

And in the end it ends up benefiting the companies that are investing that have a lot cheaper power. As the price of Bitcoin mining goes down, those people are spending more money than they're making, and they eventually have to go offline because they're losing money by mining Bitcoin, cuz their cost of power is way higher than everyone else. And so then the difficulty adjusts, it gets easier cuz there's less people mining and then you're making more Bitcoin than you were when they were online.

So you have to look at where we're at in the market and we can talk in a moment about assessing the profitability of the different project. But just kind of from a more broad overview, the reason to think about investing in the infrastructure, first of all, there's more collateral backing your investment. So you're not just purchasing your Pro Rata share of the mine Bitcoin for our projects, our investors are getting their Pro Rata share in Bitcoin dividends or paid out to their wallets through the life and the investment, but you're also purchasing the generators, the mining equipment, oil field, perhaps, or the mineral.

And traditionally, banks have not been very eager to lend on behalf of magic internet money, right? Like what is it, what backs it? Our firm actually secured a loan recently with a bank. And what they did was they used the generator as the collateral, cuz they're accustomed. These are refurbished generators that were already used in the oil fields. And so that was then secured for this loan. And so also you have the benefit of the tax depreciation of those assets. That's kind of a nice write off. So you're getting the Bitcoin, but you're also depreciating the assets.

And again, when the market is down for a long time, and this is why I find now an interesting time to be looking at investment opportunities, because these miners that have gone offline in distress are now selling their equipment at bottom prices. And so you're able to invest at a much lower rate when the market's down.

Whitney Sewell:

No, that that's helpful. Even thinking through, maybe give us a few things as we are looking at investing in a mining operation or Bitcoin mining, you know, how do we assess the profitability from one project to another? I wish should we be thinking about as an investor?

Kristine Cranley:

Great question.

So with Bitcoin mining, the one with the cheapest power wins. And so that's, what's gonna dictate how far below the price market price of Bitcoin, you will be able to mine your coins, all else being equal, right?

I mean, you don't want a company that's over leveraged and you know, has to pay all that debt servicing and all that. So you have to look at everything. The operating costs there isn't a whole lot of operating costs apart from the power. So if you had a Bitcoin mining computer and you plugged it into your. Outlet on the grid. It would cost you about 12 cents, a kilowatt hour to mine Bitcoin currently with the market being down, it is not profitable to mine Bitcoin, if you're paying much more than 5 cents, a kilowatt hour. Now most of the competitive miners are down around 4.50 cents a kilowatt hour. The company that we're investing in is actually at 2.2. A kilowatt hour. So it's even less than half. And that's because

they're getting stranded, natural gas for a dollar per MCF when currently natural gas is like closer to nine. So if your cost of power is too high, eventually you won't be able to recuperate your cost. And like we said earlier, it'll end up costing too much to mine and you're gonna have to shut down something else to be aware of is, are you on grid or off grid? Because in Texas, over the summer, we've had a lot of power needs.

There's an agreement with the mining companies and Airco our power grid that they will shut down the Bitcoin mining instantly, if there's a need and they're reimbursed some for that, they make these agreements ahead of time. Do you need to look in and find out about this? Because those people, when they go offline, they're not mining Bitcoin. Now they may be being compensated for the not mining Bitcoin, but that's downtime for profitability. Whereas if you're off grid, like with stranded, natural gas or waterfalls, whatever, you're still mining, and you may even be in a situation where you also could shut off your Bitcoin mins as well and sell that power that you're generating back to the grid. So you'd be making millions by not Bitcoin mining, cuz you're selling it back to the grid, but that's just something to be aware of. What's going on, are you on grid or off-grid and understanding the issues there.

And then one last thing I'll say about assessing the profitability is inexperienced minors. They're not always upfront. They might not even know all the costs. So one of the things to be aware of is bitcoin mining is going to become less and less profitable over time.

I mean, if the price of Bitcoin keeps going up, it's still gonna be profitable, but because more and more people are gonna be coming online to mine. The difficulty of winning the puzzle, getting that 0, 0, 0 is gonna get harder. So you want a company that's going to factor in the difficulty. So in a lot of our projections, we are assuming a 5% decrease every year in the amount of Bitcoin mind.

Now, traditionally, we've actually only experienced about a 3% more difficult every year, but it's important that the company that you're investing in be upfront about all those things.

Whitney Sewell:

See, I'd never heard of that before either. So that's helpful. I had to think about that. It is gonna be a decrease because of the difficulty. And that makes a ton of sense, cuz there's gonna be more and more computers coming online or more and more people mining.

Kristine, I didn't know there was so much to Bitcoin mining and even thinking through like the kilowatt hours and man, we need to know a lot of that right before we're gonna invest with some Bitcoin mining operations. Like I said, I've seen many come across my desk. And I'd like to know some of these things to think about and to ask questions right of those operators before investing. Thank you so much for that.

We're gonna get you again tomorrow as we are gonna jump into some more risks around Bitcoin cryptocurrencies in real estate.

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