

Unofficial Transcript

The Next Evolution of Mining Sequire Panel Between Bit Digital and Marathon Digital

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Ibrahim AlHusseini (IA): Hi everyone. Thank you for joining us. This is Ibrahim AlHusseini. I'm the managing partner of FullCycle Climate Partners. We're a growth equity fund that is working to transition humanity as fast as possible away from a high carbon to a low carbon economy. I'm here today with Bryan Bullett, CEO of Bit Digital and Fred Thiel, CEO of Marathon Digital. Both companies are publicly listed Bitcoin miners under the Nasdaq Stock Exchange. We're going to have an interesting conversation, a little bit educational in the beginning, maybe some challenging questions about the carbon intensity of this practice and the business case for Bitcoin mining itself for a lot of you investors out there who are looking to participate in the space long-term. Fred, let's start with you. Thank you again for joining us today. Can you touch on the business of Bitcoin mining and why you should an investor buy shares in a miner versus Bitcoin itself?

Fred Thiel (FT): Sure. Thanks for having me as part of the panel. So, it is like, do you want to own gold or do you want to invest in a gold miner? If you own gold or you own Bitcoin, you only get the benefit of the markup and value over time as the asset itself grows. Whereas if you invest in the miners who essentially generate the Bitcoin and earn the rewards, you get the benefit of their full profit stream. And the case of a public company like Marathon, for example, our cost to mine a Bitcoin is around \$5,000, whereas the price of Bitcoin is over \$33,000. If you buy a Bitcoin at \$33,000 and then you hold that Bitcoin until it's worth \$40,000, you may make \$7,000 of profit. But when you buy Marathon shares, you're effectively having the benefit of the potential cash flows of the difference between a \$5,000 cost of a Bitcoin to mine and the \$33,000 that it's sold for. So, you get to own a piece of the value stream and the full value stack versus just owning the appreciation of the Bitcoin itself. So, that's why we tend to make that argument. Warren Buffett made the same thing regarding the gold industry previously as well.

IA: Yeah, I understand that argument. Now, you guys are actually known for having purchased a lot of the Bitcoin and I think, over what percentage of the Bitcoin that you own have you mined versus purchased?

FT: Yeah. So, we purchased approximately 4100 BTC back in February. And today, we have almost 6000 BTC on our books. So, we've mined a little bit around 1900 Bitcoin that we hold in our balance sheet today.

IA: Got it. So, the weighted average is something different than 5000. But let's move on. Fred and Bryan, this question is to both of you. Bryan, let me start with you since you haven't spoken yet. What are the challenges of running a mining company with scale such as yours? Bitcoin

mining seems to be an arms-race toward securing machines and power. Can you share your approach and thoughts about this? And when you're done, Bryan, Fred, jump in.

Bryan Bullet (BB): Yeah, sure. And that's exactly right. Historically, machines have been in short supply. Although that dynamic is shifting as we speak. There are basically two ways to get at them. One is you can place purchase orders with the Chinese manufacturers directly. The other alternative is you can buy them on the stock market. Bit Digital, by and large, has done the latter. Reason being, we like the fact that by buying spot, we could take possessions almost immediately. And we think that gives us good capital efficiency. And in some cases, we've actually been able to issue shares directly to sellers, which is again a pretty efficient way to connect those buys. In terms of power, it's also a similar dynamic. It is a bit of an arms raise, especially in light of what's been happening in the Chinese market. There are different models. Some are vertically integrated into power. Others are hybrids. Some like ourselves have chosen to outsource that part of the value stream.

BB: We like to work with third party hosting because again, it allows us to focus on the economics of mining as that prejudiced outline, which we feel gives us the best return on our capital.

IA: Got it. And we'll get to the China piece in a moment. Fred, do you want to answer the same question?

FT: Sure. So, our philosophy is that we believe the return on investment is much greater in investing in miners. And we prefer not to own power. We prefer not to own hosting. The reason being is you look at the capital cost of putting in place the infrastructure and tying up the long-term PPAs. And then you look at the return you give miners. And granted we have very low operating costs for power and for hosting very similar to as if we own it. Yeah, we don't have to lay that capital to tie that up. So it allows us to apply 100% of our capital to buy miners, which we believe gives us much more agility. It's just a different strategy. Vertical integration versus horizontal. We've chosen the horizontal route. We believe there's going to be so much change in the power world and hosting world and miner world over the next four to five years, that we prefer agility to be tied into owning power and mining and hosting. We've evaluated both strategies. But if you own power necessarily, you could end up being a regulated utility, which you don't want to be.

FT: And we just prefer to be agile and be able to move very quickly. We have moved very quickly to buy a very large volume of miners because that was a bid we place that we think is going to play out very well for us. We'll be in over 10X hash.

IA: Okay, I'm going to skip to Bryan as of right now. Bryan, what are the metrics in which shareholders should be looking at when looking at a Bitcoin miner? What should we be looking for here as investors?

BB: Yeah, I think one of the most obvious metrics is a fleet's power to generate Bitcoin. Our fleet has generated a little over 3000 Bitcoins since we entered the business last year, we feel that's a pretty strong metric, and that's on the back of what I mentioned earlier about our spot market purchasing strategy. We're able to assemble one of the largest currently owned fleets in the listed sector today, which gives us that ability to generate those Bitcoins. In the second quarter, that number was around 562, now, that's materially below our run rate on a fully deployed basis, reason being a good portion of our machine was offline being shipped from China to North America during the quarter, that's a process we expect to complete this quarter, and to then see our mining actually ramp back up materially.

IA: Well, since you brought up China, I looked through some of the Bit Digital's filings and you've had a significant part of your operations in China. How was Bit Digital affected by this recent Bitcoin mining ban in China, and hasn't this disrupted your operation significantly?

BB: Yeah, it's a fascinating situation, and coincidentally, Bloomberg published a piece earlier today in which I'm interviewed about it. Look, Bit Digital started migrating machines from China to North America back in October of 2020, so we already had in place relationships, and logistics, and hosting partners in North America. The ban in China did pull forward in time somewhat that strategy that was already well underway. And last quarter, we were able to ship over 14,000 machines, which is our largest quarterly shipment to date. And as a result of that, I'm happy to say that over 70% of our fleet has now either already deployed in North America or on its way here. And as I said, we expect to complete that process during the third quarter. What's really most interesting to me though about the China ban is the growth opportunity it's created for us. As you probably heard, China had housed well over half of the world's mining capacity before the ban, and now many of those Chinese operators don't have any other choice, but to exit the business and sell their machines on the spot market. There have been reports that spot market pricing is down as much as 75% from its highest back in May. And so, to us as a company, obviously we're listed with access to public capital, that represents just an extraordinary opportunity to scale our fleet potentially in pretty big numbers, if you have access to that market. We happen to because although we're headquartered in New York and have US management operations, we do also have a team in China, and we have relationships with many of those former Chinese mining operators, and so we're not really aware of another company with that exact mix of capabilities to access that kind of deep value and play that distress in the China market.

IA: Did the changes blindsided you or did you have any anticipation of these regulatory changes?

BB: I won't say that we had a crystal ball, we didn't predict the timing of the bans precisely. We were of course, aware of the risks, and that was the backdrop to why we began our migration strategy almost a year ago. Look, naturally, you want to operate in a regulatory regime where you don't have to worry about existential risks to your business model, so that's why we're moving everything to North America. On that note though, I will be candid, we have in the past been misunderstood as being a "Chinese company". We recognize that misperception has been

out there, and we've been taking steps to correct it, like getting a US management team, moving our operations over here and providing more frequent reporting on that process.

Alright, thank you. Fred, this is for you, and maybe if we have time, I'll ask the same to Bryan. As you can imagine, running a private equity fund that invests in sustainable infrastructure, we care a lot about carbon intensity, and so according to the Cambridge Bitcoin Electricity Consumption Index, Bitcoin mining operations worldwide now uses the equivalent energy of a small country, medium country, actually, and at a time where the world desperately needs to cut carbon emissions, does it make sense to be devoting this much electricity to Bitcoin mining? I'd love to hear your response to that.

FT: So, got a long answer warming ahead here. So, if you look at what the Bitcoin Mining Council, which Marathon is one of the founders of, has published, I think what you'll see is Bitcoin miners, by all best estimates and forecasts, and I'm about... Sorry, ask me, so it's the energy question, right, hang on a second. [FT AUDIO CUTS OUT]

IA: So, at a time when the world desperately needs to cut carbon emissions, does it make sense to be devoting that much energy to a virtual currency?

FT: So, you have to look at energy and how energy is generated. About 20%, for example, of the energy that is generated in this country is either lost or sold at prices that are very low, so-called negative pricing, because of the fact that energy is produced all day long, but it's not consumed all day long, and energy that is not consumed, is lost. We lose upwards of 200 gigawatts of electricity daily to just transmission losses, and Bitcoin miners are the energy consumers of last resort. So, if you look at what the Bitcoin Mining Council has published, see that about 56% of the energy consumed by Bitcoin mining, now post-China mining shutdown, is done on carbon neutral or renewable energy sources. Marathon as a company, will be 70% carbon neutral by the end of Q1 next year across our 10X hash of mining capacity and will be fully carbon neutral in our energy consumption by the end of 2022. So, we fully expect to be fully carbon neutral. Now, we're using a mixture of wind, solar, and other energy sources. And I think if you look at energy generation trends in the US, North America specifically, the amount of renewable energy which, by the way, does not have battery storage capacity that's coming online, is growing very rapidly, it grew by 40% in Q1 over Q4, and it's going to continue to grow very rapidly as the cost of solar and wind keep coming down. But the problem with solar is it generates great electricity six hours of the day and not much for the rest of the day. So, it has [INAUDIABLE] capacity that Bitcoin miners can suck up. And if you look at how grids operate, especially unregulated grids like the ERCOT grid in Texas, you have a large percentage of renewable energy coming into that grid and needing to be consumed. And the benefit Bitcoin miners provide to the grid is when the grid needs the excess capacity, Bitcoin miners can shut down 200 megawatts of power consumption in 10 minutes. You can't do that with a power plant. You can't shut a power plant down in 10 minutes. You can't shut it off, but if you're going to consume that power, Bitcoin miners are a great consumer of excess electricity and when the grid needs it because consumers want it, you can shut down the mining operation, and that's when you have what's called negative pricing, which is when the grid actually will pay miners to

not mine because they need the electricity. And those deals are quite normal out there, and I think you're going to see more and more miners move towards those types of systems. The other thing you're going to see is as mining hardware becomes more efficient, and we are on the cusp of seeing a generation of miners where today top of the line, most efficient miners are operating at about 30 joules per terahash. You're soon going to see machines operating at 15 joules per terahash which means 50% lower power needs for the same amount of calc power. And when that starts happening, now you're going to start seeing a slowdown, if you will, in the growth of Bitcoin mining energy consumption, even while the global hashrate may double.

BB: I agree conceptually with many of Fred's comments with respect to demand response and curtailment. We do participate in a demand response program on the Texas grid and we do see that as an important part of load balancing in order to enable more renewables to come on to the grid. So that's certainly the case. In our case, we also have created ESG goals for ourselves, we did engage in independent ESG consultants to conduct a benchmarking exercise for us, score us and help us set targets to improve. We have historically run on a majority of carbon-free energy sources, and are looking to increase that over time. And we engage in ESG consultant because we can't be the judge and jury of our own efforts. We were told that we are the first listed miner to embark on that effort. A funny anecdote, on that note, our consultants mentioned to us when we kicked off the process that they intended to compare us to the IT industry, and we asked, "Why would you do that? Why not other Bitcoin miners?" And their response was, "We don't have any data points"; because to their knowledge, no other miners had submitted themselves to an independent ESG review. We do hope others will join us in that effort and others to decarbonize the industry.

IA: Well, thanks for doing that and leading in that. I know it's a big concern and there's so many pools of capital now that care deeply about ESG, and it's not just a label. The data requirements are very stringent. If you're gonna use carbon offtakes, they have to be tier one, third party verified, and those obviously just deal with global warming potential, they don't talk about toxicity. I know Marathon Digital is materially coal-powered and they're off setting that from what I read, and you can correct me if I'm wrong, Fred, with carbon resets, but that does not address the particularities that are emitted from coal plants, it addresses one piece of the equation, which we're grateful that you're addressing, but it's a type of technology that we're trying to get away from as fast as possible. And I was disheartened to know that there's an industry that is re-commissioning, soon to be decommissioned coal plants. Can you speak to that?

FT: Sure. So, the Harden plant uses Platte River coal, which is the cleanest coal on the planet, actually. It has half the average particulate of what you would find from the eastern part of the US. The other thing that's important to consider with the Harden plant is the coal for the Harden plant comes from an Indian reservation, which otherwise would have no revenue stream from that coal resource. And because of the fact that we're operating the plant at about 100 megawatts, that first nation's tribe gets considerable revenues which provide for the health and well-being of that tribe. So, that's something we're very proud to be able to provide which otherwise they wouldn't have. The Harden plant will not be offset using carbon offsets, it'll be offset using RECs. Why RECs? Because we buy electricity by the megawatt, if you would. We

don't own Harden, we don't generate it, we're buying the electricity. And renewable energy credits are the best way according to every ESG expert on the planet of offsetting electrical consumption. We don't manufacture anything, we operate miners, we consume electricity. The best way for us to offset that with the highest quality offset, is renewable energy credits, because we pay by the kilowatt-hour, we can buy offsets by the megawatt-hour and have a perfect one-to-one offset that's perfectly measurable. In the case of Harden, we're currently also exploring the opportunity to operate about 30% of the year on hydroelectricity, which is available nearby. And so we're in the process of starting discussions with the utilities regarding getting access to that power as well.

IA: Got it. Thank you. Well, the... I feel complete for now with the time frame that we have to keep talking about the environmental footprint, carbon intensity. So, I'm going to jump to some of these interesting new developments and the news that maybe you guys can speak to. Bryan, you recently met with the government of El Salvador in relation to their move to adopt Bitcoin as legal tender, which I believe would be the first country to do so, what were your takeaways? What do you make of El Salvador's move? And what other countries do you see following suit?

BB: Yeah, we find that very interesting. And yeah, as you mentioned, I was down there recently to meet with some government officials as part of a delegation to help share information and try to assist as they tried to implement the new Bitcoin law. And a few takeaways, I'd say what was really striking to me is the energy component of the Bitcoin plan in El Salvador, it's really a prime example of Bitcoin mining's potential to activate new sources of renewable power that wouldn't otherwise get built by providing an economic caseload for the project. In El Salvador, in addition to making Bitcoin legal tender, they have also passed sweeping energy reform, they have a plan to decarbonize the entire country by building geothermal energy. And then in addition to that, build an extra 95 megawatts of geothermal that's solely earmarked for Bitcoin mining. So that is really proof of the concept that Bitcoin mining can be an economic stimulus to create new sources of renewable power that otherwise wouldn't ever get built. I'd say my other takeaway is that really just having from, on a personal note, spent time with these cabinet ministers is that they struck me as very earnest, very entrepreneurial, genuinely trying to do something to lift the fortunes of the people in terms of financial inclusion. Something like 70% of the adult population of El Salvador does not have a bank account, they could have chosen to go the traditional route and build an old school banking system that would take a lot of time. And it seems that the government there has tried to leapfrog that process by embracing this new technology of Bitcoin. And I did see examples of it being used and accepted by merchants for small transactions. So it was pretty inspiring, and I wish them all the success and hope I'll be able to serve as a resource as they implement going forward.

IA: Thank you for that, Bryan. It's interesting, very, very interesting. So last question to both Fred and Bryan, let's start with you, Fred. So, both of your stocks seem to be highly correlated to Bitcoin's movements. Is there anything you can do, or is there anything you're doing to decouple it from Bitcoin's volatility so that investors buying into your stock for... They can buy into your stock for more reasons than a simple Bitcoin proxy.

FT: As a Bitcoin miner, you control some things but don't control other things. So you don't control your revenue price per unit, because that's the price of Bitcoin as a commodity. You control the number of miners you have, you control your power pricing, and you control your operations efficiency, if you would, but you don't control the price of Bitcoin, you don't control the global hash rate, and you don't control the difficulty rate. There are only 900 Bitcoin made per day, and the only thing you can do is deploy more or fewer miners, if you would, to contribute to more or less of the global hash rate. That's all we have in our control. And so it's very hard to decouple your stock price from the price of Bitcoin, if the only thing you could do is mine Bitcoin. You control your cost side, but you don't control your revenue side, because it's totally out of your hands other than the miners you produce, and the luck you have in winning the blocks. So I think it's very hard to take any Bitcoin or crypto proxy if you would, that is based on mining and decouple it from the price of the resource that you're mining. Gold miners are totally coupled to the price of gold because it drives whether they turn on production, turn off production, but I think if you're going to invest and want exposure to Bitcoin, and you want exposure to the profit stream from Bitcoin mining, then that is a correlation and a risk that is just inherent in investing in the asset class.

IA: Got it. Bryan, do you want to respond?

0:24:36.8 BB: Yeah, I have a slightly different take on it. As a miner, we and others are in the business of accumulating bitcoins in our treasury and holding them on our balance sheet. To us, a natural next step in the evolution would be to begin managing those holdings using certain strategies that can generate additional returns. So is the switch on effectively another earnings engine. We are closely studying such opportunities. Naturally, that entails a very careful risk analysis to make sure one selects safe and suitable strategies. There are many strategies that would not be safe or suitable for a public company, but we do believe there are opportunities to generate additional yield from our holdings with a high degree of safety. So that's something we're monitoring closely, and we look forward to potentially announcing new initiatives in that regard in the near future.

IA: Interesting. Thanks, Bryan. Okay, well, we've been asked to keep this to a certain timeframe, I think we may have a minute each for last comments that you guys would like to leave the audience with. So, Fred, why don't we start with you, if there's anything you'd like to leave the audience with, then we'll give the same opportunity to Bryan, and then wish everybody a good rest of the day.

FT: Sure. From our perspective, we've deployed about 20% of what we'll be deploying between now and the end of Q1 next year. So, we fully expect at about 10x a hash of capacity at the end of Q1, based on [inaudible] current projections for where the global hash rate would be. We'll control about 7.5% of global hash rate at the end of Q1 next year and continue to grow. So we're looking forward to continue to grow and really try and maintain a position somewhere in the future of around 10% of capacity.

BB: I'll just close by just reiterating my prior comments, we are extraordinarily excited about the purchase opportunity that we potentially face in China, that could give us the ability to scale our fleets in very large numbers in a very short space of time, by making large purchases on the Chinese spot market, which is disrupted at this moment. That's how we grew to our current scale in the past. Today, we have acquired almost entirely on the spot market, approximately 46,000 miners and today, enjoy one of the largest currently owned fleets, and we expect to be able to continue to use that strategy to grow going forward especially in light of the distress that's happening overseas.

IA: Got it. Thank you both for your time. Congratulations on your success, and I wish you both more success moving forward, may all of this incredible technology, obviously be powered with the most thoughtful, low carbon intensity technologies. And I'm glad you guys are looking in that area and being conscious about that, and I wish you both much success. Thank you again for your time.

FT: Thank you, everyone.