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The Future of Energy | Episode 1
Tom L. Ward, CEO, Mach Natural Resources

This week, we kick off our new series, The Future of Energy, with Tom L. Ward. Tom is CEO of Mach Natural Resources. SmarterMarkets™ host David Greely sits down with Tom to discuss his work at Chesapeake in pioneering the US shale boom and oil and gas renaissance – and how his work laid the foundation for the future of energy.

Tom Ward (00s):
I do know having a world market is good for all of us. It's good for every consumer, and it's good for every producer to be much more like an oil market that is able to distribute out natural gas around the world. The LNG boom and now the ability to trade that worldwide is, in my opinion, a game changer and makes it to where companies can depend on long-term futures of natural gas.

Announcer (29s):
Welcome to SmarterMarkets, a weekly podcast featuring the icons and entrepreneurs of technology, commodities, and finance ranting on the inadequacies of our systems and riffing on ideas for how to solve them. Together we examine the questions: are we facing a crisis of information or a crisis of trust, and will building Smarter Markets be the antidote?
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David Greely (01m 08s):
Welcome to the Future of Energy on SmarterMarkets. I am Dave Greely, Chief Economist at Abaxx Technologies. Our guest today is Tom Ward, CEO of Mach Natural Resources. We will be discussing his work at Chesapeake in pioneering the US shale boom and oil and gas renaissance and how it laid the foundations for the future of energy. Hello, Tom. Welcome to SmarterMarkets.

Tom Ward (01m 33s):
Well, Dave thank you for having me on.

David Greely (01m 36s):
I'm really thrilled to have you join us today to kick off our new series, the Future of Energy. The Future of Energy begins in a present in which the United States is the world's top oil and gas producer and a leading exporter of LNG and Chesapeake Energy, which you founded with Aubrey McClendon, when you were only 29 years old, was the shale gas drilling pioneer that helped transform the United States into the energy powerhouse that it is today and I imagine the effects of the shale production boom you pioneered at Chesapeake were far more profound and wide ranging than you could have imagined when you were starting off, you know, from the US LNG, helping Europe avoid the worst of its energy crisis, following Russia's invasion of Ukraine to natural gas, displacing the use of coal and US power generation, and being critical to making the renewable solar and wind power generation needed for the energy transition to a lower carbon energy system reliable. So I'm curious, you know, if we, if we turn back the clock, what led you to start Chesapeake and what were you looking to achieve at the time?

Tom Ward (02m 43s):
Oh I am 64 now, so getting older and have lived a long life through energy. But whenever I started out I was just looking for a job. So I met Aubrey McClendon in 1982 and one of the main events of 1982 was there was a small bank in Oklahoma City called Penn Square Bank that had a failure in July of 1982 and really through the spring of 1982 into the summer of 1982 the energy business was in kind of a free fall down. The longer story to why, you know, how I got to Chesapeake was that I grew up in a very small area didn't have really any plans to do anything other than to stay there for the rest of my life, maybe work at a plant or a natural gas plant that was outside of town, or if I was, that would be a very fortunate outcome, or it would be a, a pumper of oil wells or just to work labor in the oil fields.

Tom Ward (03m 48s):
But I was fortunate to, in my senior year of college to determine to go to college and my girlfriend soon to be wife we married whenever I was 19. She was 18, so after my freshman year of college and I spent the next four years through, or three years through 1981, going to

the University of Oklahoma and we both worked our way through school. I didn't have any debt. I didn't even know really what debt was in, in those times and my father had passed away when I was 16, so I was on my own basically. And I have always felt comfortable at working and would, I knew that I could provide for a family maybe not in the ways that I can today, but always thought that there was clearly some way that I would put food on the table.

Tom Ward (04m 38s):
So the long winding story is I got, I did graduate from the University of Oklahoma in 1981. I started in the energy business and by the spring of 1982, I was looking for a job and didn't have, I had one child that was just over a year old and was in need of some employment. So I actually worked during the summer of 1982 cutting wheat in western Oklahoma in the small town that we lived in and I met some local farmers worked for some that I had previously given money to through energy companies by I was a lease broker and distributed out cash during the boom days of 1980, 81 and 82 and I became friends. We lived in their small community. They ended up being my investors.

Tom Ward (05m 35s):
So I had a very small investment group that would take participations in wells and this was post Penn Square, so there wasn't any capital around and Aubrey at the same time had a group of investors from Florida, basically the same size that I was and we ended up competing with each other on the same type of projects trying to find very small working interests in wells that are being drilled in and around Oklahoma. I had access to a lot of maps of counties of Oklahoma and I had a lot of time on my hand, so I colored formations by production and I got to learn basically all of the different plays that were going on vertically in Oklahoma in the late 70s, early 80s and spent that time came to good use because I could still remember those plays as that would be developed and helped us to work on different projects in in later years.

Tom Ward (06m 32s):
But to answer your question is Aubrey and I met because we were two guys competing with each other. We were three days apart in age. We both had basically the same amount of income, which was not very much and we needed each other to go forward and, and start working different projects. I was 29 whenever Chesapeake was formed, but from 23 through 29 we worked together on a handshake basis sharing all of our expenses and during that time we participated in 600 wells together as he was Chesapeake Investments and I was TLW Investments and that's where Chesapeake came from was his idea of a name, which was much better than my initials. So that was the founding of Chesapeake was really based upon growing during a time that others didn't have much capital and participating with others and learning good practices before we ever operated well, which happened in 1989 and so during that growth, we really didn't anticipate ever operating wells. We didn't anticipate having big acreage plays. We didn't anticipate anything that came about, but just really through God's providence we are able to put together good ideas with hard work and over time began to accumulate larger investors where we could start operating our own wells and that was kind of the start of the Chesapeake story.

David Greely (08m 03s):
And I wanted to ask you what was your strategy in those early years because it seemed like you didn't have much investor capital yourself. You had a strong desire and a strong work ethic. So I'm curious, what was the strategy in those early years?

Tom Ward (08m 18s):
We were onto some pretty good projects and as you mentioned, didn't have a whole lot of competition. We did have a decent investor base because we were, much like today, we were focused on free cash flow. We had good outcomes on the wells we participated in. We put together acreage plays and sold those then used that money back into we did a good job of reinvesting our extra cash. So Aubrey and I both put everything we made back into the company and during that time we were able to build up a decent ability to participate in other people's wells and through selling acreage and just coming up with ideas and really outworking a lot of our competition and that we were very fortunate that we were in the very early days of the vertical what is now called the scoop play, which was the golden trend of Southern Oklahoma.

Tom Ward (09m 13s):
And then another field called Shalom Aleichem and that Sycamore Woodford production now along with the Hunting Devonian play was what really was the backbone of Chesapeake. So we worked really Southern Oklahoma and then by 1990 there was a lot of other activity going on and it was just the beginning of the horizontal drilling phase in south Texas really in around Trio County, Texas and what is now, you know, the Eagle Ford which started out as the horizontal Austin chalk play around the, a lot of vertical Austin chalk production and that's where we gravitated to after we started operating. We had a base of operations in Southern Oklahoma in Lindsay,

Oklahoma. We had a service company that we operated and then along with that started drilling horizontal Austin chalk wells. We started with high angle wells really in Southern Oklahoma.

Tom Ward (10m 08s):
Before ultimately that became a horizontal play, but it was much later in the sequence of horizontal drilling than in south Texas where the Austin Chalk production was early on that was being founded by a couple of companies. Oryx Energy out of Dallas was a big operator in the Frio County area and then Union Pacific which later became into, moved into Anadarko was the larger operator in the eastern part of the play around College Station, Texas and we chased that trend across Texas, South Texas all the way from Pearsall to College Station over the next three years and ultimately in 1993 went public with Chesapeake.

David Greely (10m 54s):
And I wanted to dig into that a little bit more with you because, you know, Chesapeake is really the pioneer in the growth of horizontal drilling and hydraulic fracturing that was at the root of the US shale boom and I am curious, what led you to adopt these new production techniques, and how big a risk did you feel you were taking at the time by adopting some of these techniques, which were very innovative at the time?

Tom Ward (11m 19s):
And we were pretty good at deferring risk, we watched other people lead plays. So the, across the Austin Chalk play we were looking for really not even a zone that needed to be fracked. It was open hole fractures that were over pressured and we were able to glean off of other people when there were drilling wells that they were having success and then leapfrog into different areas ahead and buy leases and start drilling our own locations. So the technology though was, was very, very young. So we were drilling over pressured reservoirs without putting any mud on the formation, using 10 pound brine and drilling wells with rotating blowout preventers to where you had a lot of pressure at the rig floor. That would be unheard of today. That was in the early to mid-90 we did start using more mud and understanding that it didn't ruin fractured reservoirs to drill with very heavy mud in the, in the mid-90s.

Tom Ward (12m 24s):
But really in all of the different plays that we started to work at, at Chesapeake the Barnett was the first true shale play that we started working in and I had a pretty good grasp between around where that, where I thought through the work that our engineering and geological teams did of where we needed to focus and we were pretty, I guess, consistent in the thick, the thickness of the shell we needed in the Barnett and stayed away from more of the fringe areas and then just with Aubrey's drive and ability to raise capital we tended to, to be able to get the capital we needed to drill in those early days and then the Fayetteville came next, and we, we started working it fairly, fairly hard and then I left Chesapeake before the Haynesville.

Tom Ward (13m 15s):
So we'd just or Marcellus, we had just purchased the Northeast US production from a group that had been backed by Morgan Stanley and that led into the Marcellus Discoveries. But the really the Haynesville Marcellus were post me being at Chesapeake. I wasn't as big of a shale fan as I was in more of the carbonate and tended to move towards the reservoirs that had a little more storage capacity. I, frankly, was just totally wrong about the Marcellus and I thought that the, the Haynesville was just a little too deep and expensive for a true shale that that depleted as fast as it did. But all that to say is that there were a lot of other acquisitions at drilling in non-shale plays, along with the shale plays as we developed out the company.

David Greely (14m 11s):
And as you developed, you know, development takes money, takes financing, takes investment. You mentioned Aubrey being able to raise that. I was curious, how important was it to have the US natural Gas futures market, the Henry Hub market for managing your risk and helping to finance that investment and growth? How did you use the futures market in those days?

Tom Ward (14m 32s):
Yeah, we were aggressive hedgers we tended to believe in, in our little bit of knowledge of the market, and would put on hedges. We, we use different structures with different banks and but yes, we use and still do today any company that has any type of debt usually has some amount of hedging in place and we probably were a little more aggressive at that at, at Chesapeake than others at that time using the Henry Hub and using the NYMEX strip in general with long-term purchases and we were good about keeping up a budget in place that, that we adhered to at that time and with raising both debt and equity and so Aubrey and Mark Roland did a very good job from the financial side of the business and keeping really enough capital coming into our business that we were able to drill really and

buy in any place that, that we chose to. We were very fortunate to have a lot of early success in the Austin Chalk and we used that to raise a lot of capital. And then ultimately when we switched into a natural gas phase and made acquisitions, we were well financed to, to be able to do that also.

David Greely (15m 53s):
And you mentioned that some of the later shale plays didn't particularly strike you in the beginning, but I am curious to know, obviously the shale boom overall transformed the energy landscape in the US and the world. When did you know that the shale boom would become so big?

Tom Ward (16m 11s):
Really I looked at it all as a continuation of just the pioneering of service companies and how you could drill and drill horizontal wells in general, just the efficiency gains have been made not only in the 90s and the early 2000s but today of using all types of techniques especially when starting with bits and just how quickly you can drill. Those were the main challenges that were overcome more than the reservoir. So it's always been known that that oil and gas was in shale. It's how much would you have to spend to get it out and early on I was a more of a skeptic that, that we could ever get to the efficiencies needed in order to be able to make the amount of return that you needed to for the investment. That over time as you saw different techniques being used and longer laterals with larger fracks that, that you could extract enough gas and oil out of, out of these different shales that they would be profitable.

Tom Ward (17m 15s):
But you know, most of the zones that are drilled in the Permian or in other reservoirs outside of the two main true shale plays are in more of a carbonate sequences that rather than shale, but the, the word shale, shale plays and shell zones is really synonymous with horizontal drilling and adding to production in the us. So I took at really the saying that, you know, when did we learn about the shale plays? Is when, when did we learn that you could find, a tremendous amount of oil and gas that was untapped by vertical wells, by drilling horizontally and that really started with the Barnett in the late nineties, early two thousands whenever people started drilling horizontally with using fracture treatments in inside of those zone.

David Greely (18m 07s):
Yeah, I keep going back to that image you mentioned earlier of you sitting at the table coloring in the map of the different oil fields, and it, you know, listening to you, it sounds like you had a, an extremely precise knowledge of fields and reservoirs and what it would take to get oil out of them. Is that true?

Tom Ward (18m 24s):
Oh, I, not technically. I have a decent memory and I have worked a lot of different reservoirs over time with a lot of great people. I did gravitate towards the operation side of our business early on and left the financial part of the business up to my partners and that was always a very good relationship for me financially. I am not nearly as astute as most but I can understand some of the things that happened in the field.

David Greely (18m 57s):
Well, you have also told me that you have not been more bullish natural gas since the Chesapeake go long move in 1998. What's making you so bullish about natural gas today?

Tom Ward (19m 09s):
Much the same thing. So in 1998 Aubrey and Mark made a trip to California and met with the executives of Calpine and at that time we had 400, just over 400 vertical rigs running in the US. The idea was there was gonna be cheap gas forever and we just lived through the two terrible decades of the 80s and 90s in our business, and everybody thought, including Calpine and other providers of electricity that natural gas was going to be the cheap source of fuel forever that would supply our country and it didn't take us very long to determine that there wasn't enough supply in place to be able to handle the amount of demand that others were bringing into the market basically through power generation and that was at a time whenever, you know, most of the generating capacities is coming from coal.

Tom Ward (20m 03s):
So as over time now, you fast forward to basically 25 years later, you see the exact same thing in my opinion is that we have amount of demand coming on that can't be met with the amount of supply that we are able to deliver today. Especially if you think of what the

changes have been made in our industry since 2018. We formed Mach in 2017 to go buy some distressed assets and use free cash flow and distribute that cash back to our investors and that now has been taken over by our whole industry, that model of how can I not grow production, not have a unceasing amount of growth, but to really have a company that that focuses on free cash flow, keeps our production modestly growing to flat and is able to have a reinvestment rate that that allows distributions to be going back to the shareholder.

Tom Ward (21m 03s):
That hasn't happened since the 1990s. So we've had over two decades of time or basically up to two decades when it started changing really in around 2020 post COVID that companies said and investors demanded that we change our ways. So if you couple that with you have this increasing amount of demand that I listened to the, the folks at Ontario fairly closely because I think they're one of the smartest management teams in the US and they have us with basically the 2030 having 30 BCF of new demand coming towards the US and, you know, even by the end of 2025, 6 BCF of that is going to be just an LNG that doesn't include all the power gen of increases that we are seeing. So I don't think that we are in a place currently even though we have had an extra TCF and a half of gas put in our laps, basically through two warm winters and, and one period of time nearly a year long where Freeport was offline, we are working through that excess very quickly.

Tom Ward (22m 14s):
So I believe that by the fall we get back to kind of a neutral state of where the market should be, and we are gonna be staring right at the another 6 or so BCFA gas just in the US with a couple of BCF in Canada and a BCF or so in Mexico, going out the door in demand, not counting a record breaking power gen every month, and not all that's gonna be serviced by wind and solar. It's the majority goes to that gas to be covering it and we are continuing shutting down coal plants or making them at least export out to India and China instead of instead of here. So I just, I don't see the math can work and therefore, what Mach tries to do, what I try to do is just be long molecules in this environment at the strip. So if I could buy something at the strip today, even though it's in Contango, I am very willing to do so because I believe long term looking out past 25, 26, 27 and beyond, that natural gas will be above a $5 asset instead of below a $3.

David Greely (23m 25s):
Yeah and you know, as you mentioned, a big part of that bullish arithmetic is the export demand for LNG that the US now has, you know, with domestic US natural gas prices still a fraction of the price of natural gas in Europe and Asia I was curious, how does the reality of an LNG export market that's so robust change the landscape for a US natural gas producer?

Tom Ward (23m 51s):
You know, it just gives us more opportunity to, to get gas to the world. So I don't know where the world goes post the next five or six years out if Qatar or others overwhelm the market with gas but I do know having a world market is good for all of us. It's good for every consumer, and it's good for every producer to be much more like in a oil market that is able to distribute out natural gas around the world, the LNG really boom, and the now the ability to trade that worldwide is in my opinion, a game changer and, and is makes it to where companies can depend on long-term futures of natural gas.

David Greely (24m 34s):
And I wanted to ask you know, coming back to some of the role being played by the government and investors the attitudes of the US government and some ESG minded investors towards natural gas fracking and LNG exports have vacillated over the years and I am curious from your perspective, how big an effect this has had on US natural gas producers and what attitude would you like to see the government and investors take towards natural gas production in the US?

Tom Ward (25m 07s):
I guess, somewhat ambivalent as to as to what the government does because ultimately it does affect the markets and if we are restricted prices will probably move up and, and so I don't necessarily get too bothered about the political statements, however, what I believe should happen is that all governments should be embracing every type of new energy because we are going to need all types to, to really go forward with this electrical revolution that we are having today in power and I don't see that really slowing down any. So I think that we, we do need everyone to do their part, including wind, solar and natural gas and if we are moving towards energy transition to be cleaner, natural gas is the product that can deliver that. So I just think there should be a general around the world embracing of natural gases. So a key role in our future energy policy.

David Greely (26m 08s):
And as you mentioned today, you are the CEO of Mach Natural Resources. It's an independent upstream oil and gas company working in the Anadarko region. It's Western Oklahoma, Southern Kansas, Texas, panhandle. I wanted to ask you, what opportunities for continued natural gas production growth in the US do you see now? Can we keep the growth going?

Tom Ward (26m 30s):
Two different questions there. I think at Mach we can just because there is still a lack of capital in our business and we can buy production at prices that haven't really, I haven't seen my career until 2018 where we can actually go buy production at and getting all of undeveloped lands for free with paying no blue sky, just buying PDP PV10 or less on, on production. So we, we believe we will grow our company through that way, but it has to be accretive to our distribution. So that's really our focus and we, we need to stay under a turn of leverage and have our reinvestment rate under 50%. I firmly believe we could grow production in the US if that's a path that investors want. I don't necessarily believe that investors want us to be growing production. We did that for a couple of decades and destroyed more capital than we ever made.

Tom Ward (27m 26s):
The idea of growth of EBITDA, of paying management teams to grow EBITDA is really out of vogue and should be and going back to a time that we keep our production in check and not because we don't want to grow, but because we want to throw out free cash flow back to our investors that is being embraced and I don't see that changing anytime soon. So I do see growth happening but it's going to be really a managed growth, not, not like it was, in my opinion, in the 2000 to 2018 time period.

David Greely (28m 02s):
And I wanted to ask you know, you said that production, you can acquire that fairly inexpensively these days. Why is production price so cheaply right now?

Tom Ward (28m 12):
You know, just less there's less capital providers. Private equity is just a small amount compared to where it was 10 years ago. I think funds are having more difficulty raising capital the, for energy in general and I don't think it's a necessarily a loved asset in the market and that there has you know, been a massive amount of very large firms that, that don't want to invest in energy anymore and so that allows those of us who do have access to capital to be able to buy things that what I think is very inexpensive prices that will pay the strip for, for natural gas and Contango and be happy with that. We'll buy the strip and backwardation and crude and be very happy with that also.

David Greely (29m 04s):
First off, I want to thank you so much for spending time with us today. It's been fascinating and before I let you go, I wanted to ask you, 'cause as we kind of look to the future I feel like much like the shale boom, the energy transition to a lower carbon, more electrified energy system is gonna require both new sources of energy and new technologies for producing them. I'm curious, what lessons from your experience in the shale boom over the past several decades would you offer to other energy producers as they work to build the next future of energy?

Tom Ward (29m 42s):
Yeah, as I think of companies in general, I like where we are at as, as an industry today. I like being a healthy industry and one that is properly funded and one that that looks to distributing back cash to shareholders. I think in the long term that will keep bringing people back into the oil and gas business and as far as the, the other transitional energy providers of solar and wind and, and other types of energy, I think there overall is seen as good and it is good and I think it needs to be embraced by, by everyone and will be and so my belief is, is that if we want to, which I believe everyone should want to continue to thrive and move forward, instead of moving back into time without energy, we need to embrace all these different types of ways that we can provide energy in the future. And I believe that will get capital over time and the each of these areas can thrive.

David Greely (30m 48s):
Thanks again to Tom Ward, CEO of Mach Natural Resources. We hope you enjoyed the episode. We will be back next week with another episode of the Future of Energy. We hope you will join us.

Announcer (31m 00s):
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