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Meet James Kamis: A Geologist's Journey

Tom: My guest today is James Kamis.

James: I have a Bachelor of Science degree in Geology from Northern Illinois University. 1973, I have a master's of science degree in geology from Idaho State University in 1977.

I've spent 45 years working in the oil and gas industry as a geologist. Also, I did a short stint in open pit mining.

The Hidden Carbon Footprint of Electric Cars

James: The real carbon footprint of electrical cars, ocean microplastics, uh, failure of ocean climate models. And then the geoengineering earth projects.

Let's start here.

Mining's Massive Impact: From Open Pit to Ocean

James: This is a photograph of an open pit mine in the background, you can see portions of the mine. The large truck here is 30 feet high, has a bunch of rocks inside of it. And so this truck takes the, uh, mined material [00:01:00] in large chunks to a processing plant.

Electrical Cars: Beyond the Tailpipe Emissions

James: So I also want to mention here up front that the way they determine the, uh, carbon footprint of electrical cars is to measure the amount of CO2 that comes out of the tailpipe and compare it to the amount of CO2 ~that comes out of, let me get a drink here.~

~Okay.~ That comes out of electrical cars, but there's more to the story. If we want to look at the whole carbon footprint, we have to look at, um, mining the materials, generating the car and a lot of things like that. And this gives us a better view of the really large carbon footprint of electrical cars.

The Environmental Cost of Electric Car Production

James: I also want to mention that there's different mines that have to get the metals and materials that are necessary to build a electric car.

So those minerals are lithium, a copper, nickel, [00:02:00] manganese, cobalt, graphite, zinc, uranium, and mercury. So quite a bit. And we have to have separate minds to get many of those things. Here's an example of an open pit mine in Utah. It is about 2. 5 miles wide ~and about 5, 000 miles deep.~ So this thing has taken out a massive amount of rock with some low grade copper.

Now if you look over to the left there, the slide, you see the words mining truck and an orange dot. For perspective, that is the size of the 30 foot high truck we just looked at. So hopefully you'll understand how large open pit mines are.

Now we'll take a look at proposed mines in Greenland. This slide is interesting. You can see it's of [00:03:00] a new area that they proposed to mine, and the scale of this is about 500 miles wide and about 300 miles, uh, long. Uh, you know, wide and about 500 miles long. So you will notice from this that there appear to be kind of greenish land areas and then blue areas that are ocean.

So the new Kleinefeld mine will be positioned along the ocean. The white lines are false. And being a geologist, I was easily, uh, it was easy for me to recognize that these linear features. You can see the bays are long and linear, or actual faults. And one of the first problems with having the Kleinefeld mine is that it's positioned along these faults.

And faults typically are open and they tap down deep into the earth. So if the Kleinefeld mine has a few little spills, Even [00:04:00] if it doesn't, underneath the mine, there's going to be these open, uh, faults and fractures. So the danger here is, I know they build these retaining things and try not to leak at the surface, um, minerals and things out into the bays.

But the problem is when you put those hard tarps underneath there, Forming the reservoir area, those faults that are open will receive more pressure. It increases the chances that the lining underneath the waste part of the mine will break loose and it will send materials out into the oceans. This particular fall, excuse me, mine in Greenland was up to be a uranium mine, because it has extremely large concentrations of uranium in the rocks.

When they drilled into this area, they found that there were a lot of different minerals here, and it's since been upgraded to [00:05:00] a rare mineral rind. But, they still maybe leak a little bit of uranium. Also, this area has a very large concentration of natural mercury and phosphate. So there's a great deal of danger here.

To clean up any of those takes more carbon.

So there's several images here. Let's start with the image on the upper left. Once the mining truck brings these huge boulders to an area, it, the rock has to be ground up very finely. And that's what this machine does. So why do they have to do that? Because when they send this now, a sand material to a refining plant, it's easier for them to extract high concentrations of, uh, lithium, uh, manganese, and whatever minerals are needed [00:06:00] to generate a car, electric car.

Then on the lower left. Is a pipeline which you can see is expulsing a kind of grayish fluid into a staging area. Now, again, to fill these reservoir areas, you have to have a huge system of pipelines. This is only one specific pipe. So you have to use the steel. You have to build a network on the right is a picture of a waste mine.

Very large. Again, you can see the black outline of that. That's this very strong, I'll call it tar paper. It goes on the bottom of that. And then on the outside, you can see another barrier. So they have contended, the mining companies, that, uh, this is safe. But as an example, we talked about in [00:07:00] Greenland, there is these fractures.

Actually, I've seen one of these mines in Colorado, and it has leaked, and there's all sorts of iron and other materials in the water.

This is a mine, uh, that open pit mine, that failed. You can see that large stream progressing towards the open ocean that's colored that kind of red color. And problem here is that once this breaks loose, it's very, very difficult to stop it and it is going to be expulsing large amounts of material into the ocean.

Now you may recall in recent news that one of the open pit mines in Florida, which was mining phosphate, broke loose. And they went out into the bay and they were very concerned about phosphate polluting it. So they have to clean [00:08:00] those types of things up, more carbon footprint.

This is one that most people don't think about when you, um, figure out what the carbon footprint is. On the left is an open pit mine being restored. So in order to restore that, they have to truck in large amounts of sand and then large amounts of soil on top of that. then seed it. On the right is the result.

That's the exact same mine that has been fixed. So when there are show pictures on the right of this, it seems like, wow, mines are recovered pretty quickly. Not true. You can see at the top of those slides, it took them, uh, four years. To recover this mine. So that's a lot of work.

Generating Electricity: The Untold Story

James: Now we skip to generating electricity [00:09:00] that's used to run electrical cars on the left is a drill rig and they drill for natural gas and that's what is used to generate some of the electricity from plants.

I sat on these types of rig as a geologist for many years. And what happens here, they drill for quote unquote natural gas. Well, it's not really natural. It is actually, um, natural gas is composed of about 90 to 95 percent of methane. So when you think of natural gas, um, buses in downtown driving around saying we're using natural gas, they're actually using and emitting methane into the atmosphere.

Not good. On the upper right is an offshore drilling rig. I worked on those for two years. Many of them were 100 miles offshore, [00:10:00] so their purpose, like the land rigs, is to drill down deep in the water, find methane, bring it up, build pipelines. May, I mentioned one more thing. Back to the land rig, the way now they get this methane gas is to frack, huge fracking.

Of course, it's been in the press that fracking is not that good. Well, that's true. It hurts it a lot, but you're using that process to get methane that helps generate it. On the lower right is a coal mine. And, uh, up until recently, a large amount of electricity is generated by mining coal and having it burn.

So, it's still a large source. So now all that methane has sent to, uh, plants that use these, uh, these materials to generate [00:11:00] electricity. Here is how they do that. They ignite the methane gas, which heats and, uh, turns a lot of turbines. Uh, in the plant and these turning of these turbines are surrounded by various rare earth metals and they generate electricity.

So you'll need a lot of these.

When we switch to all electrical cars, which is going to be a while, considering that right now there are probably approximately 300 million gasoline combustion engine cars in the United States. And the last I checked, there's only 3 million electrical cars. So you're going to have to switch to a lot more, uh, electrical electricity.

So the problem with that is you're going to [00:12:00] have to build. As it's being built here, many, many more high tower, uh, areas that hold, uh, the electricity in these big cables. So that's another carbon footprint hit.

The Complexities of Electric Car Infrastructure

James: Now we'll switch to what is usually shown as electrical car interiors. I mean, this photo looks pretty good.

Pretty modern, uh, pretty clean. Um, it doesn't definitely doesn't look like some dirty gasoline engine. So we're going to talk about the components that are needed to build this car.

First, obviously the rubber tires. So there are large plants that need to generate these rubber tiles and the rubber is generated from components of oil, again, [00:13:00] acquired by fracking rocks.

So part of the materials used to generate electrical cars is steel. So what happens is in past there were, um, steel rocks, In Minnesota, they shipped them across Lake Superior to power plant, excuse me, steel plants. They extracted the higher amount of iron, then with a few other materials, when they sent it to these type of plants, they refined it, generated steel.

Also, I worked here, um, trying to earn money during my, uh, freshman and sophomore year in into college to earn enough money to pay for my college education.

So now we're looking at an electrical car again. Looks pretty clean, [00:14:00] looks pretty modern. The element I want to point out to you now is in the middle there you see gray rectangles, though those are batteries, they're made of lithium, and lithium is difficult to acquire. And it also has to be processed before the batteries can run.

Now they have improved the technology, so that the batteries can help the vehicle go for about 300 miles, and then they have to dispose of the batteries. Well, uh, let's see, also processing to get lithium out of the rocks requires two, uh, 20, 000 tons of fresh water to get one ton of lithium. So you're going to have to be accessing a lot of freshwater aquifers.

So charging stations on the left is one, [00:15:00] there are many pictures of them on the internet. This picture makes it look like it's ecologically safe. You have a beautiful park in the background. You're watering the grass and there is one of the very good looking electrical charging stations, where there's several problems with that.

Last time I checked, there are 168, 000 gasoline stations, so you're probably going to have to convert. Those gas stations, or at least add these type of charging station to these gas stations. This is a big job. In many cases, you have to dig deep into there to get the tanks that hold the gasoline.

Sometimes they've leaked, and so you have to change that. So it's a pretty big process. And the charging takes between 30 minutes to maybe more. So this is difficult because they've learned now where they don't have enough [00:16:00] charging stations, the cars that have to line up to get charged. Uh, they have to wait sometimes for hours.

30 minutes each car. Let's say 20 minutes in line. You got a problem there. The other problem is on the right. This is an image of New York City. There are a million people that live in the city and around the suburbs. So, if they want to convert a lot of the taxi cabs to electrical, and if they want to convert many of the buses to electrical, they have to, uh, they have to put in a number of electrical stations because there's no way that New Yorkers are going to wait 30 minutes or an hour to get into a charging station.

So they have to build a lot of these. Well, where do you find the land? It's very difficult. You're going to have to get environmental permits and a lot of things. There's just no space and time [00:17:00] to build enough of these electrical charging plants. And this is where most of the, uh, Pollution is going on.

Well, let me go back to that for a moment. One last thing. They've mentioned in the press that electrical cars emit a lot less CO2 than gasoline cars. Well, it depends on where you look. They do have less. However, that's overwhelmed. By these other factors I've told you, so the true carbon footprint of electrical cars, if you take into consideration all the things I've talked about, is far greater than is talked about in research studies in the media.

Ocean Microplastics: A New Perspective

James: Now we're going to shift to ocean microplastics. This has been a course, again, in the press from research studies. [00:18:00] Uh, and other, uh, information, and they have contended that they found microplastics, uh, infused in all the ocean waters, and that smaller fish have eaten these unnatural microplastics. Got them in their intestines larger fish eat them and when we eat those larger fish We have lots of microplastics in our body They've contended this is completely unnatural and will possibly have all sorts of health effects okay, let's talk about what it takes to put a large amount of microplastics into the entire ocean On the right there are some numbers.

The area, square miles, of the ocean is about 140 million. Latest estimate are there are 600, 000 plastics on the surface of the earth. I've looked at this for a [00:19:00] long time. There are some variations that estimate it up to a million, some down to 400, 000, but this is a pretty good estimate, 600, 000 square miles.

This equates to 0. 4%. So plastics don't really cover a lot of the area. Let's talk about volume. Oceans is about 11 trillion cubic miles. Plastics about a million cubic miles. This ends up being 0. 1 percent the weight of the oceans. There's a number there. I looked and looked, and I couldn't find the name for it.

It's an Astronomica weight. Plastics, uh, between 11 and 14, uh, 14, uh, 100, 000, uh, tons. That ends up to be at 8%. So there's the perspective. of how difficult it is to put natural plastics into our ocean.[00:20:00]

Well, I think these natural, uh, these microplastics are generated by ocean floor geological features. I would mention that this is a hypothesis, but I feel really proud of this, and I'll show you some evidence that proves it. After looking for years, and especially in the last year, I've found no mention of the fact that geological features cause microplastics.

So, I think this idea, uh, it's plausible, has some value, and, um, I'm proud that I put it together.

So, generation of, uh, plastics versus generation of geological microplastics. Turns out that the step by step process is nearly identical. So on the left, man made, purchased natural gas, again which is methane, [00:21:00] and then they also extract ethane gas and propane gas out of the natural gas. Geologically, on the right, step one, geological features have been proven to emit methane gas, ethane gas, and propane gas.

Same thing. Then the natural gas is sent to an extraction plant where it puts the, uh, ethane and methane into, uh, separates them into ethane and, uh, propane gases. On the right, the geological process. Um, in addition to emitting methane gas, the geological, uh, features also emit ethane and propane, a gas step three processing plants then take this ethane gas and propane gas, and they apply extremely high pressure and extremely high temperatures, and they transform these gases [00:22:00] into kind of a plastic substance.

ethane and propane. Uh, uh, kind of mixtures and on the third, on the other side, the ocean column, where these deep geological features reside, the ocean column applies very high pressure to the, uh, the weight of it applies pressure to the geological features. These, uh, geological features, in many cases, are near deep ocean, I should say deep earth, pockets of hot, uh, lava, and this hot lava has extreme temperatures.

So that's, that's step three. I think I got ahead of myself a little bit. Then, uh, these processing plants, Transform these gases to ethylene and propylene substances. The, uh, on the right, the geological process is the [00:23:00] same. They change the et ethane and, uh, polyethylene substances because they have all sorts of different materials in that act as catalyst to do this.

Then, um, the final step is that in the manmade. Ethylene and propylene substances are combined with catalysts, and there's catalysts in the geological feature that do the same thing. So let's talk about how these geological features are generated. This is a picture, of course, of the whole world. Now, these bright red, uh, areas.

are major faults on the ocean floor, and the axis of those faults is shown in the dark black line. Now if you've ever heard of continental drift, you know that continents move. Back and forth. Well, how does this happen? It happens when these [00:24:00] axes of these 50, 000 mile long areas of faults push molten lava up and that hardens and it pushes the area of the red aside and eventually it pushes into that green area that pushing allows continents to move one to one and a half inches per year.

So that's a huge amount of energy. So also these 50, 000 miles generate all sorts of geological features. Now you really can't see them on this, but let's zoom in. The right side of the image, there's that light blue area. The dark blue area is one of these deep ocean floor faults. In fact, it's the deepest area on earth.

the Mariana Trench at seven miles deep. Now, these are pushed together faults. We talked about spreading apart [00:25:00] faults, but the blue area dives under the green area on the left at a very steep angle. Once it reaches deep inner earth, the sediments on the Right side and the rock, uh, heats up and expulses large amounts again of lava up into this area, green area on the right.

Now, this particular image on the left is high resolution. So you can see that there are literally thousands of these large volcanoes and smaller hydrothermal vents. The vents are essentially yellowstone hot geysers put on the ocean floor. Technically they're called hydrothermal vents. Of interest, this high resolution area is part of a project started in 2019 called the GEBCO [00:26:00] project.

And this GEBCO project has mapped in high resolution about 19 percent of the ocean floors. Obviously still ongoing. What they found, obviously, is many, many more geological features. Using their information, current estimates are that there are likely, um, 1 million geological features on our ocean floor.

Using this 19%. It's very likely then when they do all of the oceans and all of the 50, 000 miles of these deep ocean molten areas that they will find up to 3 million geological features. So this will act. To, uh, get more of these features than a methane that emit all sorts of things that we talked about.[00:27:00]

So what are the size of microplastics and the A area? There's a small one that's about 0. 008 inches. Of course, that's not visible with the human eye. You would have to use a high power microscope. You would To look at those, uh, D shows slightly larger particle at 0. 039 inches. So a lot of numbers.

Basically it means these things are microscopic. Why does that matter? One of them is buoyancy. If you've, uh, some of you may have gone to the Salt Lake in Utah and you go out into that and you can lay back and you float. completely. You don't have to keep moving your legs or trying to get your head up like you do [00:28:00] in swimming pools.

So that's an example of how salt water makes a very big difference in buoyancy. So our weight is pretty great. When you look at the weight and size of microplastics, it's extremely difficult to think that they could drop all the way down to all the ocean floors. It's just not feasible. There's several layers in the ocean.

They don't, they're not one huge layer. Uh, current that moves, uh, laterally. So there's all sorts of different layers. And that makes it even more difficult for the microplastics to infuse the entire ocean. So, um, that's really the big picture there. Is that, Knowing what's going on in the ocean, it seems extremely unlikely, likely, that you can infuse [00:29:00] the entire ocean with microplastics.

Bottom hugging geological features is a much better way to infuse the ocean. Now we're going to switch to, uh, ocean surface temperature.

Unraveling the Mystery of Ocean Temperature Changes

James: There has been Uh, an extreme change in ocean temperature. It's much, much warmer over the last 12 months. So much warmer that scientists are absolutely baffled how it's changed from kind of normal temperature to this higher temperature in 12 months.

So you can see that in the North Atlantic, off the east coast of the United States is extremely warm. Those red colors are very hot, the dark black ones are extremely hot, and the Atlantic Ocean off the [00:30:00] coast Of west coast of Africa. There's a lot of unusual heating switching over to the left side of the earth image there.

You can see that there's a long cone shaped area that starts in the western central part of the Pacific Ocean and spreads out and says immense amount of heat across the ocean eventually ends up on the northwest coastal side of the Pacific Ocean. Okay. This particular feature we'll talk about in just a moment, it's called an El Nino warm phase.

Then in the upper left there, you can see that there's warming going on. Alaska has a lot of active volcanoes on it. You can see that peninsula coming out of it. A very vague kind of gray line. That particular peninsula. Peninsula has over 90 active volcanoes, many of them that extend into the ocean, and there is a [00:31:00] number of ocean floor volcanoes.

So it's not unusual for this area to get heated. Back in 2014, there was one of these pulses. It just happened in a few months. And then it went through some gaps and went into the Arctic Ocean where it cooled that. So let's. Let's look at this graph. It's about warming in the North Atlantic Ocean. We just talked about heating, uh, from the surface map in the North Atlantic area.

This is temperature. Temperatures taken at the surface of the North Atlantic Ocean. Let me explain the graph. So you can see on the bottom scale, it goes from Jan, January to January. So, uh, additionally, each line that you see up there in the graph, The very thin lines represent [00:32:00] all sorts of different years from 1981 to 2023.

Now you can see that all those years are grouped together. They're kind of, uh, don't really differ from each other. Also on the graph, you can see on the left lower side that the temperature does drop. Um, after the winter, so you see that slump on the right upper side, you can see in the summertime temperatures increase.

Now the big change, which has absolutely baffled scientists, is the starting in 2023, about June, extending all the way out to November, the The North Atlantic Ocean jumped way higher. It moved from 71 degrees on average to 73 degrees. [00:33:00] This doesn't seem like a lot, but it's a huge amount, and it extends into 2024.

So this is, I think, strong evidence that something like this has to be fueled by geological evidence.

Exploring Ocean Warming: The North Atlantic

James: Oh, one other thing, the ocean has been warming, uh, there's been a lot of graphs and a lot of talk about that. When you look at data from NOAA and NASA, their graphs and their actual numbers, since 1880, the oceans have, all of the oceans, including the North Atlantic, have risen, uh, 0.

11 degrees Fahrenheit per year. Not a lot. So this is a big change in 12 months. is radical. Here's a close up of the North Atlantic. We won't spend too much time in this. We've got a lot of section, other things to talk about.

Geological Heat Sources and Oceanic Changes

James: The bottom of the Atlantic Ocean is a pull apart fall that [00:34:00] moves continents. It has a lot of geological features that have made heat, again, the center axis of this.

It meets a lot of molten lava and heat. It's dope. It's deep enough. They can't really see it. They can't monitor it. They don't have any ways to monitor this immense amount of heat. In a few areas, they are able to monitor this heat. That's the red circles. Those are actually hot geysers, hydrothermal vents.

And then of course, everybody knows about the land eruptions in Iceland. Turns out that those eruptions extend into the oceans on the North and the South. Where we've talked about, um, there are, uh, these land eruptions. This is a picture of Iceland, and you can see that the, uh, pull apart fault goes through here, and here are a number of the land, uh, volcanic [00:35:00] eruptions and lava flows.

Now another piece of information that shows that the North Atlantic Ocean is warming is in 2010. Very quickly, there was a creation of a very warm water, the whole column of the, that portion of the North Atlantic, the red there. And then there was also some movement on a side fault there, and it emitted a lot of heat.

This moved down south, and a cross fault that breaks apart the main axis, the heat blob ends there. What that blob did on the right screen, Uh, the right image is that it stopped a very well known, uh, Gulf Stream current. So this is a lot of evidence.

The Pacific Ocean's Heat Mystery: El Niño and La Niña

James: Now we're going to switch back and talk about the Pacific

Ocean.

I already showed how there's lots of [00:36:00] heat over there. Here's an El Nino that warms up a large portion of the, of the Pacific Ocean. You may be amazed to know that scientists don't know what generates El Ninos. They don't know what generates it. What they do say in their research studies and the press releases is when an El Nino starts the trade winds change.

When an LNU starts, the currents switch direction. So there are other things that prove that this heat source is geological. This area in the west central part of the Pacific Ocean is along the Pacific Ring of Fire. It encircles the entire coastline of the Pacific Ocean. It's the most active geological feature on Earth.[00:37:00]

There's lots of, uh, pushed together faults on it. It is home to, uh, 21 of the 25 largest volcanic eruptions in the last, uh, century, uh, excuse me, per year. And then it's also, also home to about 80 percent of of the earthquakes that happen on Earth. So this shows you that that El Nino location is very geologically active and emits heat.

Now let's switch to the cool phase, which emits from the same area. When the magma chamber, or the activity, decreases in the El Nino area, it starts to emit cold water. And this is one of those. What happened in the last, uh, three, uh, started in [00:38:00] 2021, went to the beginning, uh, of 2023. This cold phase went on during those years.

This is extremely rare. It's only happened one other time in the last hundred years. Why does that apply to warming the Pacific Ocean? This means that the deep lava pocket that fuels the El Nino is extremely active. It goes from cooling to heating very quickly.

Here is a graph that shows Uh, the tremendous change from an El Nino, you can see where I have the red lines. That is a very, the tip of a very powerful, large El Nino warming phase that occurred in about 2000 and, uh, [00:39:00] uh, 2098. And then immediately after that, and, you know, just a very, very short time, they went straight to a La Nina.

So back to what we're talking about, there's a quick change from an El Niño to an El Niño. This takes an immense amount of energy to transform this, not nearly enough that it could be envisioned with warming, uh, of El Niños or warming by human pollution in the atmosphere, supposedly, uh, goes downward and heats the ocean.

None of this process can make this happen.

Geoengineering and Climate Intervention Projects

James: So now we're going to switch to cooling the atmosphere. Scientists have said for many [00:40:00] years that our atmosphere is heating very rapidly. Um, actually is not. If we've shown on the previous graph, there is an increase in heating. But it's not that dramatic. However, some of those who strongly advocate the climate change theory believe it is a significant change.

So they have put together a geoengineering project. These projects are sometimes called climate intervention projects. In the cooling process, Uh, projects. They have, they intended to put immense amount of small particles into the entire atmosphere. First of all, this would take a lot of these types of instruments to put enough, uh, particles into the atmosphere to make a difference.

What the danger is [00:41:00] here is yes, these particles will cool the atmosphere. However, if during this time period, which would take upwards of about 10 years, you may have some volcanic eruptions on the right. That is a large volcanic eruption called Kambuka. It happened in South America in 2015. For this image, you can see that it, Uh, put immense amount of ash into the air.

It cooled the atmospheric temperature of the earth about five years. Now you may be saying to yourself, well hold on, those don't happen very frequently. That's true, but even when these volcanoes seem to be inactive, they still are emitting a lot of sulfur. Why is that? Cambridge, about a year ago, released a research study to find out how much sulfur is being emitted [00:42:00] by these large volcanoes through time, when they have the records.

What they found out, amazingly, is they also found that many of the smaller, Supposedly extinct or dormant volcanoes on Earth are emitting way more sulfur than they emitted. So the volume or number of these smaller volcanoes is far, far greater than these large volcanoes. And so cumulatively, these smaller volcanoes are emitting a tremendous amount of sulfur into the atmosphere continuously.

So the Cambridge study Let's hope I get this correct, have said that all climate models need to be updated to take into account this large amount of sulfur that's going into the atmosphere. They don't account for all these ocean floor features [00:43:00] like we've talked about that are emitting natural gas.

Methane, propane, ethane, all sorts of chemicals and metals. Um, so when you look at the 3 million possibly features on the ocean floor, they are too emitting sulfur. This is what a lot of these creatures that live in these deep ocean areas with no light, they eat the sulfur. That's been proven for a long time.

So there's a lot of, um, cooling effect going on. So the climate models. need to be updated to take into account for that. So there could be a double whammy. If you're putting in particles into the atmosphere to cool it, and then all of a sudden you start putting more into there, if the small volcanoes, a number of them, become a little more active, which they could, at least in the North Atlantic they [00:44:00] did.

So you're going to increase the amount of sulfur in the atmosphere. Well, if you add those two sulfur or particle things together, you could irreversibly cool the atmosphere. Now, it wouldn't send us into a total ice age, but it would cool the planet a great deal. What are the impacts of that? You could change a lot of the food.

Uh, growing, uh, you could also impact humans to a degree because they're gonna need, uh, more, uh, clothing and there's all sorts of effects there. Um, also, uh, scientists are greatly divided on this. There's a group, uh, backed by, uh, several billionaires. I'm not going to mention their name. Don't want to get in trouble.

that have backed the research on the left to cool the atmosphere. However, there's another large amount of scientists on the other side that say [00:45:00] these types of climate intervention projects are not proven, and they have said this is not true. Absolutely a disaster waiting to happen, all of these projects.

Melting Ice and Geological Features in Antarctica

James: The next one, which I have written about since 2014 and it's included in my website and many articles and my book, is reducing the amount of melting of glacial ice. especially in West Antarctica, but also in Greenland. We're going to look at the melting ice in Antarctica. On the left is an image that most people think of, When people mention Antarctica, it's this huge continent, larger than the, um, lower 48 states of the, uh, America.

And they think of it as this huge flat plain covered by ice. [00:46:00] And you often see pictures of scientists leaning into strong winds, and there's all sorts of ice, uh, snow going in their face. And, therefore, they assume, incorrectly, that the bedrock beneath this ice is not flat. It has all sorts of geological features, very dramatic, dramatic ones.

In the upper right is an example of these type of subglacial features. In the, uh, upper right of that feature that shows the bedrock, you can see some lines that shows the overlying glacial ice thickness. And that thickness is great enough to cover the surface of West Antarctica where things are melting and made it, it look like nothing going on.

The bottom part of this is an image of a lot of faults and changes in the rock beneath [00:47:00] Now the way they get this image is similar to how you shoot sound waves into a pregnant woman and you can see the baby. What they do here is they shoot a lot more potent sound waves down through the ice and into the rock layers and they can image what's going on here.

One of the more spectacular things they found was this 14, 400 foot deep canyon full of ice. This particular canyon, when they mapped it in three dimensions, is greater than the Grand Canyon. So you can imagine that these faults Our space are just immense and move a lot of things when you look to the right side of this image, you can see a lot more secondary or smaller faults.

No back to why does the geological features melt [00:48:00] the ice? Um, well, oh, 1 more thing about the surface of Antarctica. The average temperature is minus 58. 6 degrees Fahrenheit, so there's no surface lakes. There's no surface streams. So how does the ice melt and how does it change this thickness? On the bottom right is one of NASA's image that shows, uh, areas that are encircled in red and then dark shaded areas.

These are areas where the thickness of the ice has diminished a little bit. It's still covered by ice on the surface, but there's been drops in the ice. indicating that its thickness, thickness has changed. Of great note is in one of those red circles, the large one, are two really red shaded areas, and that's where the glacier's surface has dropped immensely.[00:49:00]

Now, interesting, a research by Rhode Island, Yeah, University and Texas University. I've interpreted those studies to show that there's heat being emitted from all sorts of features. I will also mention that the University of Edinburgh has shot some of the seismic under there, and they've been been able to locate Uh, 99 new subglacial volcanoes.

There was also a lot of them already known. Back to this circle of red, the Pine Island Glacier, has been offending, it's also been, The ice has been dumping into the ocean at a higher rate than the surrounding glaciers. Well, the Rhode Island research showed that there was a lot of helium and other types of chemicals in the outflow area of the glaciers into the ocean.

So they [00:50:00] measured this outflow and they found that it has Very high indication of volcanic activity. Combining with, um, a lot of the research studies like I talked about, it's very likely that these are mildly erupting volcanoes beneath the Pine Island Glacier. Same thing is true with this Thortis Glacier.

There are known to be volcanoes beneath it, and the Doesn't take a ragged scientist to realize if you have mildly erupting volcanoes under these glaciers, it's due to geological features. Um, also of interest, this red circle is a, what's called a mantle plume, uh, a technical term. So I'll try and describe, uh, describe in words what a mantle plume is.

The earth is layered, and one of the layers is the mantle. So it's a. [00:51:00] Kind of, uh, uh, a big, uh, spherical, uh, layer, uh, below, uh, below the crust of the earth, and it's, uh, a lot of pockets of molten lava are down there, some extremely hot. When they lose some of their pressure, these molten lava pockets rapidly move upward towards the surface, and they get to the lower of the crust rocks or layer rocks of Earth, and they push them up, and they heat them.

The University of Texas has found that this circle area is extremely hot and that I contend is a result of this mantle plume rising and affecting large areas in here. So what has been proposed by those advocating The climate change theory, [00:52:00] saying that the melting of these glaciers and West Antarctica is to cover these areas.

And, um, is to, uh, cover these areas and, oh, and reduce the amount of melting so they can put some kind of reflective material. One of them was, uh, put across these large areas and glass beads, which would reflect the temperature off the surface. Of, uh, and the atmosphere and solar radiation doesn't get down to here.

Well, this is extremely unlikely and really won't help. Um, because a lot of these things are geological. Again, many scientists are against this because, uh, spreading glass beads across a large area. Who knows what the heck is gonna, this is gonna do to a lot of the, uh, physical and biological [00:53:00] environments.

Addressing Coral Bleaching and Forest Fires

James: Now let's switch to protecting the Great Barrier Reef. I'm sure you've heard in the media, and if you look, some research studies that have said that large portions of the Great Barrier Reef are dying the result of warming the oceans by human activities. And so, this image shows these bleached, they call it coral bleaching, of corals that have turned white.

Well, that's really kind of a natural process for corals to die, like that, even large areas. On the right slide is proof of that. Used to be that the forest fire part of the government thought that all forest fires were disastrous. They tried immediately to put out all these forest fires. [00:54:00] Further research They found in approximately

1995 that these forest fires are actually natural.

You can see on that right slide again that there's a forest fire that went through there. These burned trees put a lot of phosphorus and other materials into the burned area and it helps a lot of trees to grow. And it also helps for areas to open up, and there's more grasses that grow, so animals in the area that depend on grasses really are benefited.

So they no longer try to stop all forest fires. I've gone to visit several areas where they let them burn and they control them so they don't go too far, but they're sure in these areas it will help. They, uh, help the areas, uh, regrow.

Insights from 'Geological Impacts on Climate'

James: Now I [00:55:00] have a book out. I have two editions. The latest edition on the left is called Geological Impacts on Climate. I've talked about a few things of how geology affects certain aspects of our oceans and also in part our atmosphere. This, my book, uh, highlights and details all sorts of other things that geological features affect.

And one of those, interesting, is Greenland. There is a huge area of heat down the center part of Greenland. NASA used satellites to map this high temperature area. This high temperature area beneath it has large faults, uh, under it, and that's probably what, uh, the heat is. is coming from. Uh, you can actually see faults.

The heat, uh, areas are long and linear, [00:56:00] then they're offset by cross faults. The reason this is important is that they've found that there is a. A 10, 000 mile long river system underneath the ice and above the heat flow area. And the, um, this, uh, system has a number of, uh, lakes. And, uh, conjoining, uh, streams and then the river.

So it covers a large portion of Greenland. There's more detail in my book about this. There's more detail about El Nino's and all sorts of other things, uh, Antarctic. Glacial ice in more detail, also sea ice in Antarctica. So I would highly recommend that you purchase this and you'll be able to really get a better view of how geology affects climate.

Now I also want to mention [00:57:00] that look, I'm not totally against the climate change theory. Many aspects of it do have value and will help the earth. Um, I get better. However, I think a plausible alternative explanation, uh, for many of these aspects is, um, geology. On the right is the hyperlink to my website.

I have over 100 articles that I've been posting since 2014. Many of them show the scientific details, and of course, many of these articles are in the book. So, that's about it. I'll turn it back over to Tom, see if he has any questions.

Tom: All right. Thank you very much. That was very interesting.

Q&A Session: Microplastics, El Niño Predictions, and Future Research

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Tom: I do have two questions, if you have time.

Sure. Uh, the [00:58:00] first one is, is there any way that, uh, people could capture some of these little bits of, uh, plastics out there, microplastics, and test them somehow to see what their origin was?

James: Yes, there has been one research study that stands out and that was done here in the last year. They were able to lower cables down to the bottom of some of the deep trenches.

Where there's these very hot features and they captured a few shrimp like features that came up and they were able to recognize that there was microplastics in these deep oceans. So that's another indication they probably won't be able to capture them and test them too much across the entire ocean.

Now going back to how they can, uh, eliminate plastics in the ocean. They can, uh, They are in the process of trying to capture a lot of these floating patches of [00:59:00] plastics on the ocean. I'm in favor of that. However, these are so large, as we talked about. The area is about, uh, 11 million square miles of these plastics.

It's going to take a while. Don't think it'll be done anytime soon.

Tom: Okay, just to get this straight, in my mind, uh, do you think, uh, like a thousand years ago, if we could have tested what was in the oceans, there would have been, uh, quite a large amount of microplastics out there even then?

James: Certainly, I'll start out by saying that ocean water and water we drink is full of all sorts of minerals.

People often think that when you clean up and take all the minerals out of water, it's better for drinking. Well, um, thousands of years ago, um, um, I'm sure that there was no processing of the water, and humans back then [01:00:00] drank water, and for a long time they've been drinking water. Their natural water is filled with all sorts of chemicals.

I know this because I took two classes from a Canadian expert. Who has been studying a systems of water in the rocks and he pointed out the same thing. There's all sorts of minerals in this and surface water that maybe you drink from a springs. So it's very natural to have all these minerals in your body.

Um, so that's it. Okay.

Tom: All right. Then the next question is, do you think you understand enough about the El Nino's originating in that one spot to be able to predict ahead of time what's going to happen, how long the next El Nino is going to last, for example, that type of thing?

James: There are some ways to do that, but there really don't have positive ways.

You may notice that, you probably don't, [01:01:00] I'll tell you this, the prediction models of El Niños and La Niñas are not, they're just not great. They fail, I think they're fail or inadequate, because they only predict El Niños when one has already started. In a minor sense, and when they see that cool water trying to, uh, slightly increasing, uh, they know that there's an El Nino coming, and so that may only be 12 months or so, and so their projections and their projections Models really don't do anything.

Same thing with El Nino. They can see that one of these warm faces starts just a little bit. They can't, their models just can't predict it. Also, um, there are all sorts of other pieces of invocation that, um, Uh, geological El Niños are forming, but they're not that [01:02:00] great. They noticed about six months before El Niños forms, there's a lot of volcanic activity in the source point on the western side of the central Pacific.

They also see that there's more earthquakes and volcanic activity in that area. So that's happening right now. There's been a pulse increase of that. Now, I will say that the U. S. G. S. United States Geological Survey has noticed that there's been a bit of a rise and, uh, earthquakes. But it's still above average, in my opinion, after researching this.

So there really is no way to predict these things. Um, one other thing is that they do see El Nino's form with bursts of heat. So what you'll get is just like volcanoes, they'll erupt. [01:03:00] Uh, ocean floor volcanoes, and then they'll send a heat pulse up to the surface of the ocean and those will stay together.

And as those pulses move over to South America, they send a pulse of heat there. Eventually all these bursts or pulses, uh, get together, but scientists have not recognized this as being an indication that there's a ocean floor volcanoes erupting and sending pulses. So really. Uh, there's, they haven't paid attention to the geology.

Tom: So do you think there are any scientists other than yourself that are really focusing on that source point and what's going on geologically or measuring carefully what's happening right at that spot?

James: No, no. Again, I've started this in 2014, um, and, uh, I started talking about this during then. So I have not seen any other scientists, uh, climatologists, oceanographers.

All sorts of [01:04:00] physicists that have ever mentioned this. So, this is a unique thing. I've noticed of late there's a few, uh, posts on other websites. Um, I won't mention one that came out and exactly took my few articles and put them on there. So that may appear. It has a, a scientific breakthrough, but no, nothing.

Tom: Okay, I'm just looking here, uh, are you familiar with the work of Mike Wallace or, uh, you, you are with the Arthur Vittorito? Are those, are you in touch with them at all about this particular subject or no? About the actual source point and El Nino?

James: No, I'm not in touch with them, but I do know them. I did a podcast on your show with them not too long ago.

They seem very intelligent, uh, people and have some great ideas, but I don't ever mention them, uh, mentioning, [01:05:00] uh, this specific geological features that generate, uh, El Niños. Could be wrong there, but I don't remember. Okay.

Tom: Uh, do you have ideas if you had, uh, infinite amount of money or if you had whatever, millions of dollars to, to really study this issue, what you would do?

What actually you would do in the real world to try to figure out what's happening over there at that certain point?

James: Yeah, I would contact universities. As best I could. Um, of course, I'm not a PhD, but I would try and I have tried a few cases to make them aware that this is a plausible alternative. Then I would take that money, uh, and a fund research by those universities.

I really don't have any plans to keep that money for myself. I just want to mention that off the cup. Yeah, a little bit for my sales, but I don't want to become, I just want the word to get out there. So [01:06:00] that's one of the things I would do. I would also take out more advertising, for instance, in the US Geological Bulletin and other things.

In societies, geological societies around the world. So that's what I do. Also, there is a way to hire people that increase your visibility on the Internet. I would certainly try that and maybe catch a few more people.

Tom: All right. Very good. Super interesting to me. Any other points you want to make now before we wrap this one up?

James: Um, no. Thanks again for having me on your show.

Tom: All right. Thank you for your work. And I will talk to you next time. James Gamis. Talk to you soon. Bye.