Primary Water Institute Inc.

TRANSCRIPTION OF YOU TUBE VIDEO: **WHAT IS PRIMARY WATER?**

Titles: The Primary Water Institute and Primary WaterWorks Present

Dr. Stephen Riess on Primary Water

The Last Interview, September 22, 1985

With Dr. Wayne Weber and Ross Frazier

In Escondido, California

The term Primary Water was coined by the late Dr. Stephen Riess, the geophysicist who independently discovered its existence and pioneered its development, beginning in the 1930s until his death in December 1985.

"My discovery was put to a field test by locating and drilling many wells. The records to date from these tests is 70 producing wells out of 72 attempts, all drilled in hard rock, all located in distressed areas generally considered unproductive." (Dr. Stephen

Riess, 1954)

Primary water is a little known renewable resource that originates deep within the earth. When conditions are right, oxygen combines with hydrogen to make new water.

This water is constantly being pushed up toward the surface under great pressure. The water finds its way towards the surface through fissures or faults. Depending on the geology, primary water can be accessed close to the surface, or even flow out as a spring.

Primary water has never been a part of the hydrologic cycle until it finally arrives at the surface. Traditional hydrologic cycle water is finite and volumes fluctuate relative to available rain and snowmelt. Primary water is renewable and plentiful regardless of the weather.

This priceless interview from 1985 of Dr. Stephen Riess is presented in its entirety regardless of camera movement and colorful language.

Ross Frazier: This is Escondido, Sunday the 22nd of September 1985 and we're taking instruction from Dr. Stephen Riess, an eminent earth scientist at his home in Escondido, high on a rock promontory overlooking the valley and showing massive protrusions of granite boulders all around. Stephen Riess is a very controversial scientist and has extensive knowledge worldwide in the finding of water.

Turning to address Dr. Stephen Riess . . . Do you have any immediate finds in Escondido in the last three or four months?

Dr. Riess: Yes we've been successful in drilling some very good wells and it happens that both locations are on the highest parts in the county. A thousand feet higher than the pump stations for the water supply from the water resources department. And the cost of pumping it from there, these stations, the river water from Sacramento up into these reservoirs here is $93 an acre foot in power bills and it is poor quality water.

So the point now is that this water wells can produce the water for $20 pumping cost instead of $93 to lift it from the pipeline below up to the surface.

Ross Frazier: And with no carrying of silt or anything of that nature.

Dr. Riess: No. It's clean water.

Ross Frazier: The water here is very pure water, isn't it?

Dr. Riess: It's exceptionally good. It's usually about one-third of the mineral content of the prevailing Colorado River water.

Ross Frazier: This is because you're extracting primary water from very deep.

Dr. Riess: This is because it is primary water obtained below the crust and is in the non-oxidizing zone.

Ross Frazier: So this is not being oxidized?

Dr. Riess: No.

Ross Frazier: And it is not picking up contaminants.

Dr. Riess: It does not dissolve or pick up any contaminants and therefore it is superior water. It does not need any more cleaning or pre-treatment for the distribution system.

Ross Frazier: And you don't have any, or very little if any, radiation?

Dr. Riess: Well, there may be fast dissolving radon which is about one day lifetime in the water in the reservoir.

Ross Frazier: And radon will not be a really factor here.

Dr. Riess: No, it is no factor at all.

Ross Frazier: Because it's decay is so rapid.

Dr. Riess: Right now. And in itself is not very serious.

Ross Frazier: It wouldn't be anywhere near the contaminants that could be picked up as a result of surface testing of nuclear weapons.

Dr. Riess: Naturally, that is the point. When they are talking about claiming waters, bad waters, which are already bad at the origin from the faucet and then going to the industrial and whatever uses there are and then go through the sewage lines, the retreating is absolute insanity.

Ross Frazier: It is not necessary because . . .

Dr. Riess: It's ridiculous. An article that I got in the paper here before me today is talking about treating two hundred million gallons of sewage for re-use. Now who in the Devil would want to use sewage water again?

Ross Frazier: It's unnecessary.

Dr. Riess: Absolutely unnecessary.

Ross Frazier: Your water supplies literally are limitless.

Dr. Riess: Naturally, they're limitless. They claim that the water is from the surface seeped in over long periods of time into the rock structure. Itself an impossibility. Absolutely.

Ross Frazier: It didn't go down through impervious rock.

Dr. Riess: Neither below the zone of oxidization. The pressure there is too high for water to continue. Rock is twice the pressure or the weight from water itself. And water is incompressible. Absolutely incompressible. Rock is more compressible than water. This is the standard knowledge that we have had for a long time.

Ross Frazier: Incompressibility of water has been known for many years.

Dr. Riess: That's why it is used in the industries for pressure checking. And to talk about reclaiming water from sewage use for public demand, why it's ridiculous. Absolutely unnecessary. Absolutely.

Ross Frazier: So that the water, even the best water, can be obtained out of the water cycle, is by all standards poor grade water related to the water that you are finding below the surface of this granite.

Dr. Riess: That's right. Once the rainwater hits the ground it immediately starts to absorb contaminants. Always

Ross Frazier: All the soluble elements that can be absorbed will be absorbed into it. All the contaminants that the precipitation washes out of the atmosphere on the way down through to the earth.

Dr. Riess: Absolutely, absolutely . . . and accumulates. It's the rub of it.

Ross Frazier: Now as a health matter, for public and personal health, water is absolutely an essential ingredient for health, isn't it?

Dr. Riess: Not only that but for the existence of life on the planet, whether it's animal life, human life or vegetation.

Ross Frazier: But all the water that is on the planet at the moment that fills the oceans ultimately, or primarily, has been generated from the source that you're finding now. Is that not so?

Dr. Riess: All the water that is now coming to the surface by deep well drilling may be a million years underground old.

Ross Frazier: And the salinization, also the complexity of sea water, is the result of soluble elements being taken out of surface water and being washed into the ocean.

Dr. Riess: Which had to come into the ocean by run-off by rain. It couldn't be there any other way. No question about it.

Ross Frazier: That is referred to generally as cycle water, or water that has gone through the evaporation, cloud formation, precipitation and the flow back into the ocean via the rivers.

Dr. Riess: Why science, and the teaching today of science has ignored the presence of about 1,500 big wells or springs in the world that go from 10,000 to 200,000 gallons a minute constantly . . .

Ross Frazier: Back into antiquity.

Dr. Riess: Way back, and are actually 8,000, 7,000, 500, 9,000 feet elevation usually in the granitic system. It is not explained. We have two wells in America, or springs in America, that produce 800 million daily. One is in Missouri and the other is in the desert in western Oregon. The one in Oregon, the western desert of Oregon, is producing the Day River. So, where did it come from? If that was rainwater, all the rain in the state of Oregon on an annual precipitation wouldn't flow that spring one month a year.

Ross Frazier: That river (the Day River) flows twelve months a year.

Dr. Riess: Yeah. But it's flowing twelve months, yeah.

Dr. Wayne Weber: We talked a little earlier about some of the chemical differentiations and compositions of the rock involved with the specific location of the wells that you've been drilling. Can you elaborate on that a little more?

Dr. Riess: Right. The main thing is if you study your structure. If you have volcanic debris from the earlier tertiary period maybe, or even earlier, like here in this country, this here is 50 million years old before it came out of the ocean. There we have contamination produced by the decomposition. The minerals fall apart. They dissolve. Whether it is copper, lead, zinc, or whatever the minerals are, aluminum, they get into the ocean and then you find them all in the water where there is high chlorine you get a high chlorinated water, and often so bad, it is absolutely unusable. But in every event it is very, very damaging to human life, to plant life, and harmful.

Dr. Wayne Weber: You're speaking in terms of ground water at this point?

Dr. Riess: Yes, ground water. But when you go and consider those very big, deep sources of water, usually coming in as springs on high mountain systems worldwide, and usually are a lake, and a big lake at times, then we end up dealing with something that could never come from the precipitation cycle because it just isn't available. Never was. You can't get precipitation water on a steep mountain range more than about one inch of water per foot of land. And if you have a ten inch rain you have about ten inch of every saturated ground. Then it is all over because there's nothing going down below twenty or thirty feet.

Ross Frazier: Certainly not your impervious granite.

Dr. Riess: Not even through the soil.

Ross Frazier: Not even through the clay.

Dr. Riess: No. Couldn't. It's impossible.

Ross Frazier: So it runs off on the surface and picks up more contamination as it goes.

Dr. Riess: And out she goes into the ocean and that's the damn trouble that they are getting it here when it's damaged and ruined if they drill it with very shallow holes. If that rain water gets off and gets into the valley, through highly porous sand and gravel, of course it sinks, and they call that the water table, which it is.

Ross Frazier: It sinks through bedrock but only to the top of bed.

Dr. Riess: Just the basin. It's basin water. That's all there is to it. And it is accumulated for centuries. Now we are pumping it away at about nine times the rate of precipitation. And it is ridiculous. I've seen a report here today in the paper where they're talking about treating 200 million gallons of sewage daily in this county.

Ross Frazier: Yes, you mentioned that before.

Dr. Riess: Yes, well there it is in the newspaper.

Dr. Wayne Weber: As opposed to the system of the ground water in the ground water table, we were speaking earlier also about the water coming from the earth in the form of steam as you mentioned earlier, and you had indicated that as this comes in the form of steam, basically condensing. And so it condenses and comes up through the fractures at that point. Could you elaborate a little bit more on some of the other chemical changes that occur as the steam is coming up and the water is clearing itself.

Dr. Riess: The steam generally reduces one percent of its volume to a heavy moist condition of heavy saturated air and then it usually is locked in with the metals and the minerals and remains there for an unexplainable length of time. But eventually it is liberated . . . the whole system. Eventually the water will dissolve any substance on this planet, no matter what it is. Everything is soluble whether it is land, rock, gold, silver, metals, whatever, it will dissolve it. That's all there is to it. And then you have it in solution. You can analyze the sea water right now and you will find practically everything in it that we have in form of solids.

Ross Frazier: Every soluble element is in sea water, virtually.

Dr. Riess: There's no question about that. But, on the other hand, if you then recognize that photosynthesis, which is just plant life, the grasses, the trees, everything that is green and living consumes 600 billion gallons daily worldwide, that's enough water to empty the last gallon of water in the ocean in less than 3 million years. So what about the rest of it? Ever since the tertiary period, 15-16 million years ago, the ocean has raised by one-third of its total capacity.

Ross Frazier: As a result of production of this primary water which you are now extracting.

Dr. Riess: Damn right. It is breaking out and it is showing up. I have a record of 915 springs and they go over 10,000 to 200,000, and a larger proportion of them, some of them go into the millions of gallons daily. And usually springs are at the high point of the mountain range. Not in the canyons.

Dr. Wayne Weber: Have you ever done any analysis of the type of structures where these springs are located.

Dr. Riess: Oh naturally. I'm locating them on this basis. If I know that crystallography and mineralogy, then I know that I can depend on that good water on drilling.

Dr. Wayne Weber: And the crystallography and the mineralogy would indicate to you which areas are contiguous with what would go into the magma. How does that relate, for example, if you have a dyke, are springs usually connected to a dyke?

Dr. Riess: Always on a contact zone whether the dyke has surfaced or not. But it has to be a surface zone. Now the point is, what people ignore, I can go over a thousand acres of land, say a whole section on these ranges (mountain ranges) and I find variations from 5 to 10 different variations within one mile, mineralogically and petrographically. The ordinary person doesn't even recognize it.

Dr. Wayne Weber: Are you talking about surface structure or actual dyke structure.

Dr. Riess: Dykes. There I can determine directly whether I have contact to the magma. The water has to come from the magma.

Dr. Wayne Weber: But because of the mineralogy and petrology of the dyke then you can say this indeed is something that is in contact with the magma.

Dr. Riess: Yes and the metals contained therein. In an analysis of what minerals are involved.

Dr. Wayne Weber: Primarily the sulfite group.

Dr. Riess: Then I know I'm right and I can dare to drill a well and expect some really good water.

Dr. Wayne Weber: So you might have a situation where you have one dyke here and another dyke over there and the mineralogy would be different enough that one would have water connected but not the other.

Dr. Riess: Yes. Not a hundred feet away on the other side of the dyke.

Dr. Wayne Weber: In general would you see one dyke connected to water here and other dykes in close proximity that are not connected to water.

Dr. Riess: Yes. I would say there are water flowing or water containing dykes and non-water containing dykes. The dyke itself doesn't have the water but did at one time and are carriers. Mineralization produced the water as the mineralization intruded. Say a pound of copper or a pound of zinc might have had millions of gallons of water depositing it. Millions. Read that book from Saltzman. We had figured out how many gallons of water it takes for one pound of borax. Borax is an unknown element prior to 50 million years ago. And the biggest deposit apparently has been Kramer, Colorado. But that is tertiary. That's the latest mineralization on this planet.

Dr. Wayne Weber: So if you have a dyke that you feel is a water former because of the rock analysis the reason that water is still coming today is that it is still in direct contact with the magma but that would generally be somewhere 1,000 or 2,000 feet down.

Dr. Riess: Oh sure. Twenty, fifty.

Dr. Wayne Weber: How do you know that you have a dyke here with the propermineralization . . .?

Dr. Riess: By the debris. By what the debris is showing on the dyke. That's the mineralogy of it.

Dr. Wayne Weber: I understand that. But once you have that, how do you decide then and what is the basic principle that you are going on as to how to get water from that dyke or near it?

Dr. Riess: What is the other side of the dyke analyzing? Maybe ten feet away and I'm out of it. I've got to follow the contact zone whatever the incline or dip is.

Dr. Wayne Weber: And then you would drill the well, for example, you have a dyke coming in from ninety degrees right here.

Dr. Riess: If the dyke shows here (at the surface) it doesn't mean a thing, I have to drill (pointing at Wayne's elbow) here (high above the lower angle of the dyke deeper under the surface).

Ross Frazier: Because here (showing deep below the surface) is where your fracture zone is. That dyke is here because there was a fracture of the granite plate. The displaced fractures are in the elbow and not in the Dr. Riess: It's a displacement fracture.

Ross Frazier: Those fractures are allowing that steam which is creating the water coming up from the magma to be there at all.

Dr. Riess: That's the passage way. The steam is way below. The steam is five to ten miles down.

Ross Frazier: But the steam is the pressure that keeps the water up in those fractures.

Dr. Riess: Right, right.

Ross Frazier: The bottom pressure is continuous. This is a continuous process. It doesn't have any end to it, does it?

Dr. Riess: No, no. Science is slowing admitting it. There are 28 universities now petitioning the government to put up eight million immediately to start drilling 15,000 foot holes to capture the steam. The steam means not a damn thing.

Ross Frazier: But their saying and admitting that there is steam there as primary steam, but they are denying that it is primary water. If I'm not incorrect, steam is water in another form.

Dr. Riess: Naturally.

Ross Frazier: We've been saying this for forty years.

Dr. Riess: Since I came out of school.

Ross Frazier: Now in connection with your work in the mining field, you found virtually invariably that when you got to a certain depth in these deep mines that you would hit this water that you're describing and it would flood the mine out. That's one case when you didn't want that beautiful primary water.

Dr. Riess: That is correct.

Ross Frazier: Because it was destroying the whole operation.

Dr. Riess: I learned what to look for not to tap caught in it.

Ross Frazier: Yes. And you learned that that water was perfectly usable because I understand that at one time you carried some of it for the camp cook and he was astonished at how good the water was.

Dr. Riess: That is correct. But I had to learn mining to learn how not to get into one of those streaks.

Ross Frazier: And this is how you found to watch the minerals.

Dr. Riess: The minerals, and the metals and the content.

Ross Frazier: When you got in and saw these things you knew that water was close.

Dr. Riess: On the given volcanic debris. See, but not usually very crystal, not very solid, not crystalized properly, but more fractured, broken, poor and weathered.

Ross Frazier: You would see this on your mine cup.

Dr. Riess: Oh yes. Then I know I have a deep seated fracture.

Ross Frazier: And on the basis of that, you can go in another direction or stay away from the major water coming up.

Dr. Riess: Once you're down in an area 4,000-5,000 feet the water pressure is so high it comes through the moment you get near it.

Dr. Wayne Weber: Have you ever actually seen water just flowing through these fissures?

Dr. Riess: Oh, sure. Certainly.

Ross Frazier: You may have this water in these fissures under pressures up to 600-700 pounds, 1,000 pounds per square inch.

Dr. Riess: Yes, yes.

Ross Frazier: With the steam pressure pushing it.

Dr. Riess: No, there's no more steam. That's already too far down below.

Ross Frazier: The pressure of the steam is still there.

Dr. Riess: The head is still there. Plus the weight of the formation is hitting incompressible material. So the water being half as heavy as the material that's holding it, which is incompressible, it has got to come through.

Ross Frazier: It must be forced through anyway.

Dr. Riess: The least little crevices and through it goes and once it has a runway it comes through.

Ross Frazier: This is the principle of the hydraulic system.

Dr. Riess: Absolutely. There's no question about it.

Ross Frazier: The instant pressure is placed on one end of a hydraulic system it is instantly at the other end because of the incompressibility of the water.

Dr. Riess: Absolutely. I've seen that water come in so fast it isn't funny.

Ross Frazier: So when you free that one end, the total pressure that's there is going to flood the whole area.

Dr. Riess: The whole area. I've been drilling into those things and pulled the drill rig out of the mine, and the boys pulled the rig out and got hit by a heavy spray of water. Just like a high pressure hose right in the face . . . a little drill hole (making a small hole with his hand to illustrate small size).

Ross Frazier: And continues to come out until the mine is flooded and you can't see it anymore.

Dr. Riess: It never stops until it finds its pressure level.

Ross Frazier: When the weight of the water and the pressure are equal it stays there.

Dr. Riess: Now the last big discovery was in Africa in one of the big gold mines I happen to own stock in. They went from 5,300 feet level to 8,300 feet level through the shaft. Down, down, down. Hit the water and out! Eight-seven million gallons of water a day and it came up to 5,000 feet in the mine and stayed there.

Ross Frazier: So this water that you're finding in these deep crevices is continuously trying to seek an equilibrium in its pressure.

Dr. Riess: That's right. And if you find it fairly solid in your material you shoot through, watch it. If you keep on going, you've just lost her. She's bound to come in.

Ross Frazier: And there is no such a thing as exhausting the water supply because it's continuously being born.

Dr. Riess: No. It's absolutely impossible or there would be no water on the planet. The daily loss of water on this planet by each blade of grass, by every vegetation, everything alive means there would be no water in the oceans in less than 3 million years.

Ross Frazier: So many years ago you forecast that the oceans, when they get down to find it and were able to test it, would have massive amounts of fresh potable water in the bottoms.

Dr. Riess: I kept telling them that. That's the only source of water we could have.

Ross Frazier: And now when they go to find the Titanic at 12,800 feet, they're finding just what you said.

Dr. Riess: Right. The last Scripps expedition that they had, 12,000 feet in the Pacific they found a 3-inch spring flowing beautiful fresh water and a little ways away a spring, or whatever it is, 700 degree steam.

Dr. Wayne Weber: Now why is that, Steve? Why does one have fresh water and one has steam?

Dr. Riess: Different source, different connection, different dyke.

Dr. Wayne Weber: Like you were talking about before, dykes. One dyke here and one dyke there.

Dr. Riess: My three wells in Idaho, they're less than 200 feet apart, all of them, and each one has different chemistry. And each one is a big well, big flowing water, but not the same water. High class water but the chemistry is different in each one of them.

Dr. Wayne Weber: So the root of this dyke, these different various dykes, is going down at a different angle. They're all connected with the magma.

Dr. Riess: They have to be.

Dr. Wayne Weber: I guess what I still don't understand is why one dyke here and one 100 feet away, going to the same source, one would be highly sulfide, mineralized water, hot water . . .

Dr. Riess: They don't go to the same source. They're different (makes a movement with his hands to show different directions that are opposite).

Ross Frazier: The fissures are all different.

Dr. Riess: They come in on that last extrusion.

Ross Frazier: You're working with the top of the fissures.

Dr. Riess: Right.

Ross Frazier: And the fissures are at an angle so as they proceed down through the 25 miles there are miles of probable base.

Dr. Riess: They split away. They split from the top down and out.

Ross Frazier: What you really have is a big chunk of granite that's been fractured like that (hand motion) as a result of volcanic action.

Dr. Riess: Not the granite. Granite is preceded by volcanic rock. Granite is a crystalized sedimentary, mostly ocean.

Ross Frazier: What is it that is fractured below then?

Dr. Riess: The basic debris which is what we call the plutonic rocks.

Ross Frazier: Sub-granite material.

Dr. Riess: They are way below the granite source. They're below the basalt. That Meyer drill never hit the granite. Never. We didn't intend to either. There are a few big granite blocks like this laying on top but they never were there originally.

Ross Frazier: So what type of material is he going down through?

Dr. Riess: Volcanic debris. All kinds of mixture. This is nothing positive. You can't classify it as this or that or the other. It's just a mish-mash.

Dr. Wayne Weber: A volcanic sedimentary that has probably been there for millions of years.

Dr. Riess: For millions of years. A volcanic conglomerate but no crystalline structure.

Dr. Wayne Weber: You've intersected the fault lines . . .

Dr. Riess: The contact zone. And that's where that water is migrating on.

Dr. Wayne Weber: What I still don't understand, Steve, is why you have this massive fissure system down there with the branches coming off of it and why, going back to the hydrothermal vents coming off the bottom of the ocean are so different?

Dr. Riess: They're coming from a different source. They have a different outlet. That is not the source there for the water. This one may come from over there. This one from half a mile in. But they're all different and wind up in this outflow structure which was created by the gases under volcanism.

Ross Frazier: They converge at the top but they are dispersed at the bottom.

Dr. Riess: Completely.

Dr. Wayne Weber: And the reason one is fresh water, potable, drinkable source is that it depends on which rock formation it goes through.

Dr. Riess: Naturally.

Dr. Wayne Weber: As opposed to the one that is highly mineralized.

Dr. Riess: How long it's been locked up under what type of metallic structure. If it's in the rock with about 500 or 1,000 or 10,000 years, it dissolves the minerals.

Dr. Wayne Weber: So the water that you were able to intersect is . . . .

Dr. Riess: Condensed steam originally.

Dr. Wayne Weber: I guess what I don't understand is why that condensed steam in some areas is mineralized and other areas it is not. Where it's not mineralized the minerals precipitated out . . .

Dr. Riess: The steam comes through a highly mineralized fissure and you've got bad water.

Dr. Wayne Weber: What determines that?

Dr. Riess: The dissolving of the minerals. Water has a terrific quality of dissolvement. Some is fresh flowing and clean. Others is locked up for thousands of years under a metallic structure. So there it is.

Ross Frazier: The leaching process has had a very long time with which to act and the water now. You've got what we call pregnant water there with the minerals that have leached for many years.

Dr. Riess: The last report that came out claimed that they have now found water a million years old.

Ross Frazier: The water that is good has been deposited in something where the leaching process is very small or where you didn't have the metals.

Dr. Riess: The metals come in as a transmutation of the elements. They're not metal when they started out. It's a constant change. A life cycle of the elements themselves which they never considered possible but now they know it is. This planet is life. Everything else goes through a cycle like you and I.

Ross Frazier: The water first then, or the steam, or whatever else leaches out these leachable elements, carries it and transmutes it.

Dr. Riess: Transmutation.

Ross Frazier: It then deposits the metal up again, way up again.

Dr. Riess: Where the pressure resists.

Ross Frazier: And so the metals got there as a result of being carried by water or steam.

Dr. Riess: No other way. As a gaseous state. The outgassing on this planet is unbelievable.

Dr. Wayne Weber: The water you let out in these major mines, was most of that good quality drinking water or was most of that heavily mineralized.

Dr. Riess: No, no mineral. When water comes in high volume there is no mineralization. They were originally, possibly, depositing all the minerals. The continuation they were cleaned. There was no more metal coming.

Dr. Wayne Weber: So theoretically, would you say that generally you would find better quality water in mineralized mining areas as we know them today?

Dr. Riess: Deep sources, yes. But not on the surface where it is light. And on the surface, the upper 500 feet has got oxygen.

Ross Frazier: The leaching process is accelerated by oxygen in the water.

Dr. Riess: It's so simple that while there is a lot to be observed and studied yet, nature has shown us clearly long, long ago that the source of water is the depth, not the sky.

Ross Frazier: Well, after all, seven-tenths of the earth's surface is water.

Dr. Riess: On the surface but not the mass.

Ross Frazier: The depths of the seas are greater than the depths of the land. We have sea depths 36,000 feet.

Dr. Riess: That's only the crust of the earth.

Ross Frazier: Deeper than Everest is high.

Dr. Riess: That's right.

Ross Frazier: And the water that you're speaking of . . . this primary water . . . has been filling these massive basins for trillions of years.

Dr. Riess: Right. And they're still doing it.

Ross Frazier: All we're doing is borrowing a little part of it that went up through the earth's crust on solid land instead of into the bottom of the ocean. And these waters are constantly being formed by the process of the magma against the materials at the bottom of the earth's crust.

Dr. Riess: The cooling of the earth's interior. The more cooling proceeds, the thicker the crust. We find right today that at the high mountain ranges the crust is shallower than in the deep sea. That's why we call the Andes the Andes Mountains because the lowest known rock formation is andesite. Andesite, Andes. And the surface crust there is about 6,000 to 8,000 feet shallower than on the ground here in the lowlands.

Ross Frazier: The thickness of the crust varies enormously around the surface.

Dr. Riess: The higher the ranger, the shallower the crust.

Dr. Wayne Weber: Can you elaborate a bit more on the temperature of the water of the wells because of the fact that they're a little bit higher than normal.

Dr. Riess: Well, it's very simple. The ground temperature here is about 56-58 degrees. Now if I drill water and find it is 78 degrees means that I had 1600 feet of depth. You gain 1 degree for every 80 feet.

Ross Frazier: Every 80 feet you go down you gain one degree of heat no matter where you drill on the earth's surface.

Dr. Riess: So when you get 80 degree water you know how far down you've gone. You know the surface which is controlled by climate conditions, sunshine and light and temperature atmospheric. So say here it is 58, 60s and I drill down 2,000 feet what do I get? I get 10 times 8 is 800 I get 25 degrees higher temperature. So I should get 90-95 degrees. And it usually checks out that way. The interior heat eventually gets immense.

Ross Frazier: The well that you drilled in the Sinai Desert in Israel, the scientists that were there said that it couldn't be found there, did they not?

Dr. Riess: Naturally. If it had not been for Ben Gurion giving instructions that nobody should question my work or not obey my orders we would have never drilled.

Ross Frazier: You would have never found it. So Ben Gurion was the one responsible for making they obey you, and they knew it too, and you found a well there that produced how many gallons per minute?

Dr. Riess: About 4,000 per minute but we only pumped about 1,200 or 1,400. About 1,000 gallons a minute.

Ross Frazier: And how deep was that well?

Dr. Riess: 1,150 or 1,200 feet.

Ross Frazier: No other water well had been found around that area at all.

Dr. Riess: No. They drilled a lot of dry holes there.

Ross Frazier: And the area with water was highly arable, was it not?

Dr. Riess: Close by, but when I drilled the well it was a deep rocky canyon. But nearby was the big lands which they put into agriculture.

Ross Frazier: And as a result of your drilling that well there in Israel and the tremendous publicity that you got for it, and from it, they got a hold of you in Saudi Arabia. So you were standing with one foot in both camps, and getting water for both.

Dr. Riess: Right. But that's where it started, you see. The Jewish newspaper there, the Jerusalem newspaper, came out big with two pages headline. The look that they had to find that beautiful water. But the Arabs could read Hebrew there and the next day the newspaper in Cairo and everywhere let loose. And the Arabs though those b***ards can't survive, there is no water. They can't make it.

Ross Frazier: And Saudi Arabia as a result of some of your finds has done some natural development.

Dr. Riess: Naturally but the big trouble was the Jordan River comes out sixty miles inside Israel and flows about sixteen miles into Jordan. So the Arabs complained, the Jordanians, when they put 500,000 acres into immediate agriculture by taking Jordan River to flood the country.

Ross Frazier: Taking the water anyway from Israel.

Dr. Riess: Then it went into big arguments. Finally it could only be solved by an international court in Hague. The Jews had the management under control and somehow paid off, or whatever it is, and came in with the statement that they cannot use that well now because it has gone to salt, because it is a mile from the Red Sea. And they made that thing stick. So the ruling by the international court was 50-50 between Jordan and Israel and they had to let that water roll again.

Ross Frazier: Did they mention the fact that Jacob's well in Jerusalem had also gone to salt at the same time as your well?

Dr. Riess: They got away with the rawest deal.

Ross Frazier: Jacob's well went salt at the same time that your well went salt. And was it the same kind of salinity? Like pure water salinity?

Dr. Riess: They got away with murder.

Ross Frazier: But they didn't pay you for that other than your trip over there and back.

Dr. Riess: I was hired by a bunch of local Jews in Los Angeles.

Ross Frazier: You did go to Saudi Arabia and you did find water there for them? You found water for them in their sand dunes and their oil fields in the Northeast part of Saudi Arabia?

Dr. Riess: Yes. Near the Persian Gulf. I found good water there too. Saudi Arabia has no problem with its land. There's lots of water in the mountain range, like here. Beautiful timber and potable water that can be transported into the desert region. Well, they had to go up there finally and get it in jugs out of springs. There was no more. The springs had gone sour because they drained it too fast. And King Faisal the first went with me and took me up there. And they had a big tank in which they dumped their jugs of water. But women there, that was their daily chore to bring in this spring water in jugs. It was their chore and fun. And they would meet and talk and chat. And we had that water going and I said to the Prince that you've got all that money from your oil you had better pipe that water into those houses now. Do away with that unsanitary tank. He said "no". I said "why". He said that would be the end of me.

Ross Frazier: Very unpopular to get rid of their daily recreation.

Dr. Riess: He said that if we stop those women from their daily recreation we'll have a revolution we couldn't win.

Ross Frazier: And we're seeing that he was right in America at the moment.

Dr. Riess: Sure he was right.

Ross Frazier: America is proving this to be correct, isn't it?

Dr. Riess: Right.

Ross Frazier: That's like the revolution we're having with our women here at the moment.

Dr. Riess: He was right, boy.

Ross Frazier: Trying to change custom is a bad thing to do. And you found this to be so in telling the truth about the deep water that you're finding. The custom is killing you.

Dr. Riess: I'm in the same vein. He came with me out there because he was so interested in lifting his people out of their problem. And he spoke good English, he was educated in Oxford, England. And he told me that we are just in the state where we are waking as a country, as a people. It's gonna be tough.

Dr. Wayne Weber: When you located the water out there in Saudi Arabia you said you did it out there in the Sand Dunes. Were there any geographical features to go by?

Dr. Riess: This was all basin land over here and that hill over there (pointing) was the mountain range and went up there and located a well up in the pine woods, up in the mountain, which to them was screwy.

Dr. Wayne Weber: So does this vegetation in very dry areas like this lead you to the dykes and the deep water?

Dr. Riess: It's deep water. Yes. Hydrogen.

Dr. Wayne Weber: How do you relate that then to one of the signs to find these areas?

Dr. Riess: Sure, deep seeded water. There is three times as much water growing vegetation than is ever deposited by rain. This is only one-third of the water they can get. Remember if you had an inch of rain, it wets that ground one-foot deep average.

Ross Frazier: It moistens the soil to one foot deep. It can't go anywhere. It's all absorbed by the soil. Like a sponge.

Dr. Riess: A ten- inch rain which is an awful heavy rain during a month, the worst you can get is 10-12 inch of soil moisture. No more. They claim that no rain has yet been found to go over 30-feet deep.

Ross Frazier: That's a maximum penetration in even the very wet areas of the earth, only about 30 feet.

Dr. Riess: That's right. Ross Frazier: So the idea that the deep water percolated down from the surface water rain is just an absurd suggestion.

Dr. Riess: Plus the volume.

Ross Frazier: And the volume. But it would be an absurd suggestion even ignoring the volume. It couldn't go through that impervious material.

Dr. Riess: Simply ridiculous. This paper here says 200 hundred million gallons down here in San Diego area of sewage daily. Now you multiply that over the population areas. Well there isn't enough water coming down from Sacramento.

Ross Frazier: If enough of the wells that you're finding were drilled here, California could be perpetually independent of water being transported from any other state.

Dr. Riess: That's what I'm driving at. There's no question. I've got the geological structure to do just that. That's not a problem.

Ross Frazier: Are you of the opinion that if the politicians had the final say the world would still be flat?

Dr. Riess: I suppose so. Because 90% are nothing but con men. They just say yes because somebody told them to do so.

Ross Frazier: And you know for a fact that all of the all of the billions of dollars that have been spent bringing water in is merely bringing silt from one place in the country to another place.

Dr. Riess: That's right, and made a hell of a lot of money for the big land speculation.

Ross Frazier: Now the water that's in those canals that is being brought down from the Colorado River is continuously deteriorating water because it's picking up soluble elements from the surface as it comes along, isn't it? At a much more accelerated rate because the sun or the solar heat is accelerating that precipitation.

Dr. Riess: And because that water is running in open canals without any concrete bottom. Forty or fifty percent seeps away on the way. That's what they claim. And then, of course, evaporation. Naturally. There is no question about that.

Ross Frazier: So evaporation alone would make that water poor quality.

Dr. Riess: Yes. Now the whole thing is absolutely childish. If it wasn't for the greed of some people, ignoring the welfare of anybody and everything, we wouldn't be in such a mess. If we had politicians with any brains or brought up intelligence, or education to be made aware of it couldn't happen.

Ross Frazier: Experience has shown that you have to go on your own and not be influenced by political opinions anyway and you're simply producing beautiful, clear, potable water out of 2,000 feet below the earth's surface. Water that could only come from the source that you've identified many years ago. And, in fact, you now have beautiful potable water regardless of what the scientists, the engineers, the politicians refute the fact. It's very hard for them to refute the fact that your theories are good when they find your water the way it is.

Dr. Riess: But that's a bunch of legislature. Eight out of ten wouldn't know what you're talking about on water. They're just told to vote yes, whatever side they're on.

Ross Frazier: Maybe they would be better able to help you if it were whiskey you were finding.

Dr. Riess: Oh, they would, sure, providing they found a market for it.

Ross Frazier: Or all that they could not consume themselves and they could find a market for.

Dr. Riess: You know, you have to marvel about the welfare of society being so insecure when you come right down to it. Extremely insecure. We see that now, right now, in Mexico today. You take those high rises in Los Angeles, New York, a hundred and twenty stories. When they collapse there is no chance to get in and find anybody under a pile of rubble there.

Ross Frazier: Our society is very fragile. Delicately balanced.

Dr. Riess: And many of those high rises have ten and fifteen thousand people working in there every day.

Ross Frazier: So if the earthquake happens during the middle of a working day . .

Dr. Riess: You'll find nobody. Because the pile of rubble is so high you can't get in, start digging, or do anything.

Ross Frazier: And the water systems are destroyed in natural disasters.

Dr. Riess: And the gas line breaks underground.

Ross Frazier: And so the availability of your water would be there regardless of whatever earthquakes had occurred or not.

Dr. Riess: That's right.

Ross Frazier: And it would even be there if nuclear testing in Russia were accelerated. It wouldn't change your water quality at all.

Dr. Riess: No, no.

Ross Frazier: We might survive being on the western side of Russia's testing area simply because of this beautiful potable water that you're able to produce.

Dr. Riess: What they don't kill off by the explosive.

Ross Frazier: Yes, but we are the recipient of all the fallout from Russia's experiments because we're on the western side of it.

Dr. Riess: We get the least of it. The Chinese and Africa . . .

Ross Frazier: The upper air currents are flowing east of Russia so we're getting a lot of their test fallout. But we're east of Russia and so we're getting a lot of their test fallout, aren't we?

Dr. Riess: No. It would have to come all the way around first. Anything from here goes the Atlantic and across. When they had the testing here with the nukes, Russia got the worst. They had over 22,000 dead there. From Asia . . . Northern Siberia is going to get a big part of it.

Ross Frazier: In the event of nuclear explosions, this water would remain safe and potable.

Dr. Riess: Absolutely. What's left wouldn't have anything to worry about. The only part that could possibly be contaminated is the lake, the springs and reservoirs. But you'll never hurt the deep water. Never reach it. Radiation can't penetrate that deep.

Ross Frazier: Are you able to connect up the early days of your life when you went and saw those wells along the castles overlooking the Rhine River.

Dr. Riess: Well, that's when I woke up as a youngster about twelve. It impressed me, that's all. I realized that it took these people about 50-80 years digging through usually everything like conglomerate, absolute resolidification of sedimentation, granite. They had a lot of that.

Ross Frazier: Very solid material and they were digging down through it. Those wells were dug hundreds of years ago.

Dr. Riess: Well, the first well was started digging around 930 AD under Charlemagne. Just about a thousand years ago. And the wells are still completely usable and excellent water. One of the most recent ones was in Edinburgh, Scotland at the Queen Elizabeth castle up there. That went down about 1500 on basalt and around this is salt water high tide and low tide water.

Ross Frazier: Not affecting it at all. How deep?

Dr. Riess: About 1100 or 1200 feet deep way below the level of the salt water. The salt water is just a deep marsh. Very shallow. Couldn't get a deep ship in there either, just boats. The water business has to change like a religion and that's hard.

Ross Frazier: Yes, because deep seated beliefs are deeper than the water.

Dr. Riess: On the other hand, I begin to see where we cut through the wall. The need for water is to our advantage or we wouldn't have a leg to stand on.

Ross Frazier: Yes. Like our need for good air and good food.

Dr. Riess: Yes. If it wasn't for the absolute need, the worry of running out, they wouldn't spend billions to put sewage treatment in and everything, but that isn't enough.

Ross Frazier: The surface water that's being used in certain parts of California agricultural regions is collecting soluble elements at such a rate and also the sprays that are being put out (are polluting the surface water).

Dr. Riess: It's ruining agriculture.

Ross Frazier: The agricultural areas are being destroyed because of this poor grade surface water.

Dr. Riess: A certain area there, I understand that the grapes went sour and they got rid of them.

Ross Frazier: Yes and in another area they were letting the outflow from the fields which they flooded to irrigate them flow into a marsh and all of the life in the marsh was destroyed, so as you predicted, the surface water is not improving but getting worse and worse as time goes on. But your water is getting better and better because it doesn't have . . .

Dr. Riess: We are washing it over and over and cycling it and every time it gets dirtier.

Dr. Wayne Weber: One of the solutions that the Department of Water and Power has to avoid some of the water shortages they want to bring in excess water and store it in the wells off the San Fernando Valley. It seems to me that you're just going to be contaminating all that water that you're going to be putting into the wells.

Dr. Riess: Oh sure, the whole thing is silly, absolutely silly. We've either got to stop the population from using it up completely or slow down agriculture.

Ross Frazier: The wells that you did for California City which are still hammering away there at full blast which is almost over twenty years ago, those wells were producing beautiful potable water.

Dr. Riess: They still are.

Ross Frazier: Before you drilled those wells in there they told you there was no water available at all.

Dr. Riess: Well, not only that, they prevented the California City Company from selling any land or doing any building for five years because of the lack of water. Because they have no pipeline. You see they let them fool around with us for two years with the city of Los Angeles the metropolitan water to get cut in on that line coming down from Bishop. They played around and the lawyers had a good time I suppose with meeting after meeting after meeting. Nothing happened. Then we went and approached water resources and they said no that they wouldn't bring any water in from the Bakersfield area over there. They couldn't afford it. There was not enough demand or income from it.

Ross Frazier: It wasn't economically feasible.

Dr. Riess: That's right. Then I shopped that hole down. I drilled five or six wells there and then I put a big one down where the government said the test wells to them had proven it an impossibility and that was right out in the center there where the lake is now and the golf course. Naturally, they admitted that.

Ross Frazier: How could you have made that lake without water? "Oh, it will pump off. You've got a small pocket there?" So I argued with the b***stards up in water resources to send me up there and I said you well know that locked in water, closed in water, would immediately disintegrate by all the absorption and destruction of all the mineral constituents. "Well, yeah, but there is a lot of it there and you get that pretty quick." So nothing happens there. Then after five years they went and sued them in the court. They figured there had been too much publicity on this so they dropped it and gave them a permit to start selling lots, building homes and what have you.

Ross Frazier: They didn't want to go into court and admit that they had been wrong if you hadn't pumped out your water in five years and still fifteen years later you're still pumping water.

Dr. Riess: That's correct. We had water to waste. I had three wells under tap going into the waterfall and the lake and another two for residential and house use and whatever there was.

Ross Frazier: What quality was that water?

Dr. Riess: First class water and still is and had them baffled and has them baffled yet because it's against their religion.

Ross Frazier: Maybe they started baffled, do you think?

Dr. Riess: Well, they're very naturally stupid, but this upset them more.

Ross Frazier: But it doesn't upset you to think they're wrong.

Dr. Riess: No. I knew they would be. It's like you and I trying to convert one of those fanatic Muslims that want to drive a truck with explosives in through a gate or something.

Ross Frazier: There are none so blind as those that will not see. And you have shown these people that in addition to the bumble bee which theoretically can't fly, Stephen Riess can find water where there is no water. But the water is there and it's flowing and Stephen Riess did find it.

Dr. Riess: Did I ever give you a report from Jerusalem?

Ross Frazier: No, I've never seen that report but you've told me about the wells. You had a thousand gallons a minute in those wells. But you feel it was entirely a political thing on the Jordan River that made them deny the fact . . .

Dr. Riess: Well, they had to.

Ross Frazier: Well, they felt they had to not tell the truth. But then it was too late.

Dr. Riess: They had to tell a half-story, not to tell the whole truth. They had to tell the wells are bad and can't be depended upon.

Ross Frazier: But it was too late because they had already publicized it all over the country and it had gotten as far away as Saudi Arabia.

Dr. Riess: But several years later they admitted in the United Nation Meeting at The Hague in Holland that the wells had gone to salt water, intrusion by the Red Sea. Two years ago, a lawyer in Washington investigated and he saw that I had it and he used to be a newspaperman in Washington and they told him the whole story.

Ross Frazier: Political influence can do terrible things to the truth and reality. You're continuing, although you independently found it, you're continuing a theory that was started by a Swedish scientist many, many years ago who was also nominated for a Nobel Prize.

Dr. Riess: Yeah, but he died before that. He drilled seventeen holes on the offshore islands where the light houses were off the coast of Sweden. And in that country they had a big problem to keep the water from freezing in the winter time. So he drilled those wells and he invariably hit water in the granite. Now they were small little four-inch and six-inch holes, but he proved all of them in his theory of the continuity in the tidal water, see? Well, what happened, the Swedish scientist who was one of the highest ranking geologists in his day, his father was the superintendent of the mines in Finland that were mining ore from under the ocean beds and they were mining ore from under the ocean beds and they had fresh water under the ocean in the land mine. See? So his father kept arguing with him saying, "Now how can we get fresh water under the ocean surface? Where does it come from?" And then Otto Nordenskjold, was his name, he began to use his brain power and got to working it over.

Ross Frazier: He was dead before you developed your science.

Dr. Riess: He died in 1904.

Ross Frazier: So he died many years before you began.

Dr. Riess: I knew nothing then. I was born in 1898.

Ross Frazier: So the theory is still as good today as it was then because that hasn't changed.

Dr. Riess: See what happened when we got finally done and negotiated the damn thing and got to Salzman, the professor teaching at that time in Los Angeles, wrote that book with me, he followed me for about two years and the wells I drew all over, I didn't know I had done that many, until lately checking..

Ross Frazier: Eight hundred and some odd wells over how many countries in the world? Over fifty countries in the world?

Dr. Riess: Something like that. So he came to that information by having two students from Norway at his class do the research for him. And one of them came and said, "Oh, I read about one of our old time geologists, he was of that same opinion and there is a book out on him." He brought the book in and he translated it. He was a North Pole geologist. Very famous for his North Polework. So, there you are.