STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

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IN THE MATTER OF PROPOSED
AMENDMENTS TO 19.15.2,
19.15.5, 19.15.8, 19.15.9,   Case No.
AND 19.15.25 NMAC   24683

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HEARING

DATE: Wednesday, November 5, 2025
TIME: 9:00 a.m.
BEFORE: Hearing Officer Felicia Orth
LOCATION: Wendell Chino Building, Pecos Hall
1220 St. Francis Drive,
Santa Fe, NM 87505
REPORTED BY: Gerald Aragon, Notary Public
JOB No.: 7626656

A P P E A R A N C E S

ON BEHALF OF NEW MEXICO ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT:

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I N D E X

E X H I B I T S

NO.	DESCRIPTION	PAGE

(None marked.)

P R O C E E D I N G S

HEARING OFFICER: Let's prepare to begin this morning, please. Good morning. My name is Felicia Orth. The hearing officer appointed by the Oil Conservation Commission to conduct a hearing in OCC-24683 regarding well plugging and financial assurance.

We are on day 13 of the hearing, and we have reached another public comment session. Just a few things about public comment. I'll invite comment from folks in the room and on the platform.

If you're on the platform, please raise your virtual hand. I will ask you to spell your first and last name. I will ask you to swear or affirm to tell the truth, and I will ask you to keep your comments to three minutes. Let's start this morning with Senator Pope. Senator Pope, can you unmute yourself?

SENATOR HAROLD POPE: I can. Thank you. Are you able to hear me?

HEARING OFFICER: Oh, yes. Yes. Thank you very much. Senator, do you swear or affirm to tell the truth?

SENATOR HAROLD POPE: I do.

HEARING OFFICER: Thank you. Please go ahead.

SENATOR HAROLD POPE: Sure. Chair,

Commissioners, fellow New Mexicans. Thank you for the opportunity to speak today.

My name is Senator Harold Pope, Jr., and I'm here because of the people -- because the people of New Mexico deserve clean water, healthy communities, and a fair system that puts public wellbeing over corporate neglect.

For more than a century, oil and gas development has played a role in our state's economy and identity. But with that history comes responsibility. Right now, New Mexico faces between $700-million and possibly $1.6 billion in oil and gas cleanup liability.

We have nearly 700 known abandoned wells with the possibility of another 4,400 wells at high risk if they were to be abandoned by operators who walk away.

And in the last five years alone, $100-million in state and federal tax payer dollars have already been used to cleanup orphaned wells. Let me be clear, New Mexico tax payers should not be the cleanup crew for corporate pollution. If you drill it, you should clean it up.

Yet today, our bonding rules, the financial guarantees companies must provide to ensure cleanup, are drastically outdated.

Under current statute, a company with

dozens or even hundreds of wells, can post as little as $250,000. Meanwhile, the average cost to plug a single well is $163,000. And some wells can cost over $700,000 to reclaim. That math does not add up.

We are essentially giving operators a green light to profit up front, while leaving the public with the bill when they walk away. That's not responsible development. That's a corporate subsidy at the expense of New Mexico families, the land, and water.

And New Mexicans understand this. 89 percent of voters across parties agree that companies should pay to clean up their own messes. This isn't partisan. This about fairness, accountability, and fiscal responsibility.

Why this matters. This is not an abstract issue. Abandoned wells leak methane, benzine, and toxic fluids. They contaminate ground water, hurt wildlife, and create explosions risks.

The wells most likely to be abandoned are often located in rural communities, tribal communities, and communities of color. The very places that have starkly received the least investment and the most environmental harm.

As a New Mexican, we take pride -- as New Mexicans, we take pride in our land. Our families farm on it, ranch it, hunt on it, recreate on it. And we tend to pass it down, healthy and whole, to our children and grandchildren.

We cannot allow our landscape to become a checkerboard of abandoned hazards. Every day New Mexicans work hard, follow the rules, and clean up after themselves.

The teacher can't leave their classroom trash and expect the state to pay for it. A small business owner can't dump waste into a river and walk away without consequences.

Why should wealthy oil and gas corporations, many based out of state, many earning record profits, get the break -- get to break that social contract?

This is about smart budgeting. Updating money requirements is not about punishment. It's about common-sense fiscal stewardship. The LFC's nonpartisan analysis supports strengthening these rules. Ensuring adequate bonding today, will prevent massive liabilities tomorrow.

Especially when industry cycles boom and bust. If we don't fix this now, we know exactly who will pay later. It'll be the taxpayers.

The message should be simple. This is

about our water and land because it's sacred in protecting it. Our communities deserve protection, and our taxpayers deserve fairness.

If companies profit from drilling in New Mexico, we must take -- they must take responsibility for restoring what they disturbed. That is not anti-industry, that is pro-New Mexico.

So I respectfully urge the Oil and Conservation Commission to strengthen bonding requirements to reflect real cleanup costs. Ensure that polluters, not the public, bear the financial burden. And to protect our water communities and future generations.

And to my fellow New Mexicans listening, your voice matters. Join us in this, and ensure that if they drill it, they clean it up.

This is about protecting our home, our health, and our future. Thank you for your time and commitment to our state. Let's do the right -- let's do right by our people, and ensure that New Mexico's legacy is not one of abandoned pollution, but one of responsibility, stewardship, and pride. Thank you.

HEARING OFFICER: Thank you very much, Senator. We'll go to Robyn Jackson. Can you unmute yourself?

ROBYN JACKSON: Hello.

HEARING OFFICER: Hello. Could you spell your name, please?

ROBYN JACKSON: My name Robyn, R-O-B-Y-N. Last name Jackson, J-A-C-K-S-O-N.

HEARING OFFICER: Do you swear or affirm to tell the truth?

ROBYN JACKSON: Yes.

HEARING OFFICER: Thank you. Please go ahead.

ROBYN JACKSON: Thank you. Good morning, Chair and Commissioners. My name is Robyn Jackson, and I'm speaking on behalf of the Navajo Environmental Justice Organization, Dine C.A.R.E.

In strong support of the proposed bonding rule changes. I've heard the argument that we shouldn't be changing bonding requirements because our well plugging system is broken, but I think that gets it exactly backwards.

The reclamation fund is there for emergencies, not for corporations to rely on as a backup plan when they walk away. If we don't fix the bonding system now, the problem only gets bigger and more expensive.

The rule is about preventing the future

risk of more abandoned wells. If we require fair bonding now, we won't need to drain public funds later. That's not just smart government; it's basic risk management.

A broken system doesn't mean we wait to act. It means we -- it means we act now to keep things from getting worse. Right now, there are nearly 700 wells that oil and gas corporations have abandoned. And another 4,400 that could be abandoned in the future, which threatens our health and drinking water unless we make them clean up.

New Mexicans are paying the price when corporations walk away from their responsibilities. Nearly $100-million in public funds have been used to clean up abandoned wells in just the last five years.

That's money that could've gone to our schools, our roads, or our clean energy future. The truth is, most wells in New Mexico are owned by wealthy corporations that can afford to do the right thing.

If a corporation can't afford to clean up, then maybe they shouldn't be drilling in the first place. Please adopt the proposed rules, and protect New Mexico's future. Thank you.

HEARING OFFICER: Thank you, Ms. Jackson. We'll move then to Clay Arrington.

CLAY ARRINGTON: Yes, ma'am.

HEARING OFFICER: Hello. Would you spell your first and last name, please?

CLAY ARRINGTON: C-L-A-Y, A-R-R-I-N-G-T-O-N.

HEARING OFFICER: Do you swear or affirm to tell the truth?

CLAY ARRINGTON: I do.

HEARING OFFICER: Thank you. Please go ahead.

CLAY ARRINGTON: Thank you, Commissioners to -- for taking the time to listen today. I work for a company that operates oil and gas wells in New Mexico.

I myself do not live in New Mexico, but I grew up going on vacations with my family multiple times a year. at least four times every year during my childhood. I continue this with my children today.

The natural beauty of New Mexico continues to call me back. And preserving this, and the environment, is of the utmost importance to myself and the company that I work for, for future generations to enjoy.

The opportunity to work and produce gas in the state of New Mexico has been the high point of my career. The rock and the prospectivity is world class, and that future prospectivity will only grow from what we know today.

Our company employs 18 full-time employees, and utilizes over 140 subcontractors that employ hundreds more, that call New Mexico home.

The wells our company produces are on the central basin platform, where many of the so-called marginal wells are located. While a few of these wells do fall into the marginal category, according to the proposed rules, there's vast upside to extend and raise production.

We've recently recompleted one such marginal well, boosting production by 325 percent. There's more opportunity for this type of work, and for future horizontal drilling opportunities in all of our operated properties in the state.

We would also like to grow our footprint in the state. We feel that this state already has stringent but clear guidelines to operate under.

These opportunities for both recompletions, horizontal drilling, and for future growth through acquisitions, will not occur if the proposed financial assurance and transfer limitations are put in place.

My family, 18 families in Eunice, and

hundreds of subcontractors and their families, are asking the NMOCD to put in place fair and smart rules. Not blanket mandates that will punish good operators like us.

That will force us to become insolvent or operate elsewhere. Thank you for your time today.

HEARING OFFICER: Thank you, Mr. Arrington. We'll move then to Patty Berry. Ms. Berry, will you unmute yourself?

PATTY BERRY: Yeah. Here I am.

HEARING OFFICER: Hello. Would you spell --

PATTY BERRY: Hello.

HEARING OFFICER: -- your first and last name, please?

PATTY BERRY: Yes. It's P as in Paul, A-T-T-Y, B as in boy, E-R-R-Y.

HEARING OFFICER: Thank you. Do you swear or affirm to tell the truth?

PATTY BERRY: Absolutely.

HEARING OFFICER: Please make your comment.

PATTY BERRY: All right. I'm happy to be here with you all today. I came to New Mexico as a young child, and have lived here off and on. Excuse my voice because I've had a bad cough.

I've lived here off and on since 1952. I have been here in Santa Fe the last 40 years. And have experienced the ups and downs of the New Mexico economy in relation to education. Affordability in regards to housing, and the economy in general.

We raised four children here in Santa Fe, and watched the education system go down when funding was cut. I know the importance of the funding coming from the oil and gas industry for this state, and the state's reliance on it over the years.

This industry is vitally important to keeping affordability in the forefront for education in New Mexico. And is vital in my mind, to rural New Mexicans for our farmers to operate efficiently, and continue to prosper.

I'm grateful for the advances that have been made in the industry, and for the opportunities that have been opened up for smaller communities to prosper as the oil and gas operations continue.

We are blessed to have the resources here in this state. And can continue to grow as they are accessed efficiently and safely. The idea of imposing more restrictive regulations can have unseen consequences that could harm our children's educational futures.

This is what is so important to me right now. We need more support for those areas that encourage our children's interests in science and conservation.

So I urge you to not put forth these regulations. I think that we have to be very careful. And I'm also open to -- I want honesty and fairness because they are vital to their continued success. Thank you for my -- for giving me the opportunity to speak.

HEARING OFFICER: Thank you, Ms. Berry. We'll move now to Sean Ramey.

SEAN RAMEY: Yes, hello.

HEARING OFFICER: Hello. Would you please spell your first and last name?

SEAN RAMEY: My name is Sean, S-E-A-N. Ramey, R-A-M-E-Y.

HEARING OFFICER: Thank you. Do you swear or affirm to tell the truth?

SEAN RAMEY: I do.

HEARING OFFICER: Please go ahead.

SEAN RAMEY: Thank you. Hello everybody. I am Sean Ramey, a New Mexican resident speaking for myself. There are three essentially non-exclusive, primary reasons why I'm supporting the changes, and why I urge you to support the changes to the current bond legislation on oil wells in New Mexico.

First, it is just plainly outright egregious that almost $100-million of public funding has been poured into plugging oil and gas wells in New Mexico.

(Inaudible) oil and gas companies, many of which are not even in the state, absolutely have the funds to clean up the mess that they make. And it is clear that the burden should not be put on the shoulder of New Mexico residents.

Second, increased bonding is backed by the public, as well as the best available science. I am someone who works within the legal and policy field with a scientific background. And I cannot emphasize enough, the importance of integrating science in our environmental legislation.

Finally, I have been in positions where I have surveyed abandoned oil wells across the state of New Mexico. And I have witnessed the impacts they have on the environments.

If you approach them and see them, you will notice that within the immediate facility vicinity, there is nothing around them. And that's because these wells, even if they look like they are not leaking, they are. They have lasting impacts on the soil and the water beneath it.

It is clear to everybody New Mexico has its issues with obtainable water. And especially, clean water. Especially to those not represented in underfunded communities.

It is heartbreaking to see the impact on the environment in the communities that improper regulations on oil and gas have. Needless to say, oil and gas has many great things for the state of New Mexico, as its economy is completely depend on -- dependent on it.

However, it is our job as the public to voice our -- voice our concerns in situations like this. And that is why I urge you guys, and everyone, to support increased bonding legislation moving forward.

And we cannot let large corporations essentially put profit over the environment time and time again. Thank you very much.

HEARING OFFICER: Thank you, Mr. Ramey. We'll move next to Jennifer Grassham. Ms. Grassham, can you unmute yourself?

JENNIFER GRASSHAM: There we go.

HEARING OFFICER: Hello. Would you spell

your first and last name, please?

JENNIFER GRASSHAM: J-E-N-N-I-F-E-R, G-R-A-S-S-H-A-M.

HEARING OFFICER: Do you swear or affirm to tell the truth?

JENNIFER GRASSHAM: I do.

HEARING OFFICER: Please go ahead.

JENNIFER GRASSHAM: My name is Jennifer Grassham, and I am the president and CEO of the Economic Development Corporation of Lea County.

I am also a proud resident of Hobbs, a community that depends on oil and gas jobs. There's no doubt that these rules would inflict real harm to families like mine.

The proposed rule would place impossible costs on small operators, and threaten the livelihoods of people who work hard every day to keep this industry running.

These rules don't just affect companies, they affect people. When a rig shuts down, it's not just one worker out of a job. It's their family, the mechanic, the restaurant owner, and the school that depends on that tax revenue from oil and gas.

These are good jobs that pay mortgages, put food on the table, and keep young people here in New

Mexico. Oil and gas production is a cornerstone of our state's economy. It funds our schools, roads, and hospitals. When the industry struggles, our entire state feels it.

If this rule is adopted, the irreparable harm won't just be to the oil and gas industry in our state. The harm will certainly spill over to the long-term economic prospects of all New Mexicans trying to make a living in New Mexico. I urge you to reject this proposal. Thank you.

HEARING OFFICER: Thank you, Ms. Grassham. We move now to James Brockway. Mr. Brockway, can you unmute yourself? Hello. Sheila, you might have to unmute a phone number as well.

JAMES BROCKWAY: Is that any better?

HEARING OFFICER: There you are. Yes, thank you.

JAMES BROCKWAY: Okay, good.

HEARING OFFICER: Would you spell your first and last name, please?

JAMES BROCKWAY: J-A-M-E-S, James. Brockway, B-R-O-C-K-W-A-Y.

HEARING OFFICER: Do you swear or affirm to tell the truth?

JAMES BROCKWAY: Yes, I do.

HEARING OFFICER: Please go ahead.

JAMES BROCKWAY: Okay. Good day to everyone. And I hope that after the elections -- or election day, you came out on top.

My name is James Brockway. And on the topic about oil and gas, kind of hits home for me as my family has been associated with the oil and gas for -- in a very unique way. Been around a long while.

My family was the one that -- my father was born in Oil City, Pennsylvania. And prior to that, my family kind of started the transportation industry back over a hundred years ago.

On the east coast, they started Brockway Trucks. On the west coast, they started Ground Coaches. The ones that made the buses and the fire trucks in the Los Angeles area.

But as a member of the family that produces the buses and fire trucks under those names, you know, it's -- I've been very -- very much involved with the oil and gas industry, and so on.

I was in the Air Force, been over in Europe as well as Vietnam. I worked for the Department of Defense and I've retired from that.

And I have friends of mine who actually work in the oil industry in southern New Mexico. And very thankful for the work and time that they put in over there.

To update a lot of this, living in California, lived out there until everything went south there. Home prices and everything. So I moved to Albuquerque, and the state is rich in resources. Especially, oil and gas. We're number two in the nation.

And the bottom line is, I just want to see, you know, the oil industry stay (inaudible) and productive. And that if we're going to take and taxes or fees to that, the mom-and-pop oil, you know, owners, whatever. They're the ones that are going to suffer.

Bottom line really is that if we have it to where the oil industry is supporting our schools, we don't want to dumb down New Mexicans or America for that matter. And that adding these fees or levies will only hurt us, instead of help us.

And that's why everybody is moving away from Albuquerque or in New Mexico, because we've put so many restrictions and penalties on it that nobody -- none of the businesses want to move here.

And so I'm just begging that you rescind or, you know, not put in place, the fees or taxes that the mom-and-pop oil industry has. And that we continue on with what we've got, and make it more profitable. And that's -- that's my saying on that.

If you would for us, please, not add the added fees or taxes. That's all I have to say. Thank you.

HEARING OFFICER: Thank you, Mr. Brockway. Do we have anyone else on the platform who would like to offer comment? We're certain that we will have another public comment session tomorrow morning.

That's Thursday morning at 9:00 a.m. Let's see. Sheila, Greg Petty. Mr. Petty, can you unmute yourself?

GREG PETTY: Yes.

HEARING OFFICER: There you are. Would you spell your first and last name, please?

GREG PETTY: Can you see me?

HEARING OFFICER: No, but we can hear you clearly.

GREG PETTY: Okay. I'll try to turn the camera on. I don't know why it's not --

HEARING OFFICER: There you are. Now we can see you.

GREG PETTY: Okay. Good morning, Chair and Commissioners.

HEARING OFFICER: Hold on. Would you

spell your first and last name, please?

GREG PETTY: Yes. Okay. It's Greg, G-R-E-G. Petty, P-E-T-T-Y.

HEARING OFFICER: Do you swear or affirm to tell the truth?

GREG PETTY: Yes, I do.

HEARING OFFICER: Okay. Go ahead.

GREG PETTY: My name is Greg Petty and I'm here today just as a regular citizen of New Mexico. A state I grew up in, a state I moved away from, and a state I was really happy to move back to, regardless of all the other issues that are going on in our state.

It's beautiful, diverse state, and I want to speak as a citizen to preserve that. As I'm sure you have already heard, probably many times over the last few days. If you drill it, you should clean it up. And that's for 100 percent of the time.

Regardless of how many corporations the well is sold to. Right now those wells are being dumped on the citizens of New Mexico, and the cost is very high.

But the real reason that I'm concerned is just simply from the health aspects of what is leaking from these abandoned wells, or the wells that are very, very seldom used, or pumping oil and -- or gas anymore.

We can't allow the methane and the destruction of the -- of the rare water resources to just be left as they are if a corporation walks away from them. And I -- you know, I've heard the other people's comments about, yes, it's -- these could cost jobs.

And my experience in banking and finance and other industries, is that every corporation cries wolf when profits are threatened. So really, what I'm advocating is, that we just have, and I think this rule does that, sensible bonds.

And I really don't believe that they will cost jobs to the average citizens of New Mexico. We just cannot allow the continued poisoning of our lands. And the polls -- I'm sure you have the polling data.

The polling data is that 90 percent of New Mexicans approve of these common-sense rules. So I would please urge you to vote for stronger bonding rules, and I thank you for your time.

HEARING OFFICER: Thank you, Mr. Petty. Is there anyone else on the platform? If you dialed in, you can hit star 5 to raise your hand. Otherwise, let me -- Chrissie Waquie. Ms. Waquie, can you unmute yourself, please?

CHRISSIE WAQUIE: Good morning.

HEARING OFFICER: Good morning. Would you spell your --
CHRISSIE WAQUIE: Can you hear me?
HEARING OFFICER: Yes. Would you spell your first and last name, please?
CHRISSIE WAQUIE: It's going to be Chrissie Waquie. C-H-R-I-S-S-I-E.
HEARING OFFICER: (Inaudible) --
CHRISSIE WAQUIE: W-A -- I'm sorry?
HEARING OFFICER: Good, thank you. Keep going.
CHRISSIE WAQUIE: Okay. W-A-Q-U-I-E.
HEARING OFFICER: Do you swear or affirm to tell the truth?
CHRISSIE WAQUIE: Yes.
HEARING OFFICER: Thank you. Please go ahead.
CHRISSIE WAQUIE: Good morning, Commissioners. My name again, is Chrissie Waquie and I'm speaking on behalf of our tribal members, our medicine people, the medicine man association. I am a member of that through our sweat lodge.
I would greatly appreciate that we have a stronger bonding in our rules, and clearing up all this mess for our -- through our aquifers. This land has

been pristine for a long time, and now it's being violated in such ways. And the cleanup has just been disastrous.

Our livestock are being affected. Our kids are being affected. Schools that are nearby are being affected with inadequate water. It's bad enough that we don't have water or electricity on some of these reservations.

So I just request that, you know, we have a better understanding and transparency in getting this cleaned up for our community. It's affecting everybody. We barely even have any water.

So that's all I'd like to say. And I greatly appreciate your including my comment in this. Again, Chrissie Waquie from the Dime Medicine Men Association.

HEARING OFFICER: Thank you very much, Ms. Waquie. Is there anyone else on the platform that'd like to offer comment this morning? All right. Let me see if there's anyone in the room. Sir, were you here for comment? If you would join us here up at the front. Yes, please.

STEPHEN COLLINS: Good morning.

HEARING OFFICER: Your first and last name, please?

STEPHEN COLLINS: Stephen Collins. S-T-E-P-H-E-N. C-O-L-L-I-N-S.

HEARING OFFICER: Do you swear or affirm to tell the truth?

STEPHEN COLLINS: I'm sorry?

HEARING OFFICER: Do you swear or affirm to tell the truth?

STEPHEN COLLINS: I do.

HEARING OFFICER: Thank you very much. Go ahead.

STEPHEN COLLINS: Okay. I've lived in Santa Fe for almost 25 years. And I actually first came to Santa Fe when I was 12 years old, which is more years ago than I care to remember.

Over that time, I've come to develop a close connection to this special place, and now consider it my home. Over my time here, I've learned that the oil and gas industry gets preferential treatment, in large part by well-funded lobbying on behalf of big oil. In some cases, funded by taxes that we pay.

Industry lobbyists claim the system is working fine, but it's not. It's definitely not working for the average New Mexican. The state's own reports show that existing bonds cover less than 1 percent of actual cleanup costs.

That's not acceptable and needs to be changed for the health of our land, water, and the health of our people. It seems like that should be self-evident, but apparently it's not.

Stated simply, companies should pay before they drill. There's no earthly reason why oil and gas companies should be allowed to drill without posting a promise to leave a well as clean as it was before they began. And post a bond in advance to cover the full cost of the cleanup.

If they can't afford to do that, they can't afford to drill in the first place, and should not. Period. New Mexico already has thousands of orphaned wells that taxpayers are on the hook to pay for.

Not to mention the leaking methane, accelerating climate change. The consequence of years of unregulated extraction and processing that already adds to the burden New Mexicans must bear.

A policy that requires full cost bonding in advance of any drilling, backed up by rigorous enforcement, is a bare minimum to protect our valuable assets. Nothing less than full cost bonding will address this.

If I rent an apartment, I have to show

good faith by posting a deposit in advance, or I don't get to rent the apartment. It's not okay for companies to come here, take what they want while they make obscene profits, and then leave like a drunk uncle. Leaving the rest of us to deal with their mess.

They need to do their fair share to protect our land, air, and water. What they're doing now only adds to an already existing problem. They need to be held accountable. Thank you for the opportunity to make this comment.

HEARING OFFICER: Thank you very much, Mr. Collins. I don't see anyone else in the room. So I believe we will return to the technical case. So we need Dr. Arscott up here.

MR. CLOUTIER: (Inaudible) hearing officer, if Dr. Arscott could have access to he can screen share, please?

HEARING OFFICER: Thank you very much, Mr. Cloutier.

DIRECT EXAMINATION

BY MR. CLOUTIER:

Q Dr. Arscott, for your (inaudible) rebuttal, first question I have is, and I will not get the quotation right. So please, I ask nobody think I'm quoting.

I asked Mr. Purvis what the evidence was that showed that this rulemaking, if adopted, would result in actual bonds that would actually reimburse the reclamation fund.

And he pointed to your Exhibits 8 and 9. And I would ask that you tell the commission what you believe those exhibits evidence, and what they don't.

A So I have up here from yesterday's slide deck, Exhibit 8 is on slide 17. I think most of it was -- most of that comment was in relation to Exhibit 8 as opposed to Exhibit 9.

Exhibit 9 is mostly about the possible effect under various scenarios to the operating costs to operators, depending on the cost they face for bonding. As well as the lease operating expenses they face on their wells.

So I think the most -- the most -- I think the table that is most related to Mr. Purvis's comment, is this table 8. I'm just going to -- that a bit bigger.

So what this is doing is showing the disproportionate effect on small operators. This is not meant to be taken as my opinion as to how much the state will be able to raise in bonds.

What I'm showing you here in the rightmost column, is the average bond per well under the proposed rules. And the column immediately to its left, is the average bond per well -- bless you -- under existing rules.

And you can see that the increase for the smallest of these operators, that would be in column 1. And then as you move down the table, the column -- or row 2, row 3, et cetera.

These operators are getting larger and larger. And I'm -- the point I'm trying to make with this, is that the proposed rule is going to disproportionately affect these smaller operators.

I want to remind everyone that the data that feeds into this table is limited to vertical wells only. And that makes this table especially not indicative of the actual bonds that will be raised for the largest operators.

Because if you look at the bottom row, these are operators operating more than 500 wells, more than 500 vertical wells each. It's very likely these operators also have horizontal and directional wells that are not in these -- these data.

And so those operators not only will have additional wells, which would impact the calculation of the proposed financial assurance, given the 15 percent threshold, which would lower the average in expectation.

The average bond amount under the proposed rule.

But also, these are the most well capitalized, most financially resourced operators in the state. And to the extent that I would expect operators to adapt to any new proposed rule, these are the operators that have the financial means to adapt quickly.

And are the ones that are most able to, especially with regard to the 15 percent threshold. I think, either adjust their portfolios by plugging marginal wells that they may have, or divesting from those wells in some fashion.

And so this isn't a table that's meant to be interpreted as an opinion of how much money the state will raise under the proposed rule. It's more a table to show that the proposed rule will have a disproportionate effect on small operators.

Q Let me just ask a follow up question then on that. So on the first line of that table, where the number of wells or operator is one, and you identify 61 operators.

Are you offering any prediction there, how many of those 61, if any, are going to incur the additional, whatever that is, $111,000 in costs for the bond?

A So on row one you mean. So if on average under the current rule, that operator is bond amount of about $39,000. Would they post a bond in the amount of $150,000?

Q That's my question.

A If I understand --

Q Yes, sir.

A So I think that assumes -- let's -- we have to think about the way in which that operator could satisfy the bonding requirement.

If that operator has a revolving credit facility and could issue letters of credit, then perhaps. But if, as I believe, most of these very small operators have no recourse other than to post a cash bond.

The liquidity demands of that cash bond may be such that that operator may not be able to do it. And so in that case, if we're talking about a cash bond, I would be concerned that that operator would not actually post it.

Q All right. Thank you, Dr. Arscott. And I believe you submitted some rebuttal slides. And ask that you walk through those for the commission, please.

A Yeah. So the first comment I'd like to make, this is in regard to testimony from Mr. Peltz, and it's something I agree with.

Mr. Peltz has testified that, in his opinion, a prudent operator is one that is a careful steward of their resources, and is a good community member. A good actor essentially. And that's something I agree with.

I think that good community members have a non-monetary incentive to do the right thing, right? It's sort of like the analogy of, you know, do you put your shopping cart back in the carousel, right?

And so when you pull into the grocery store parking lot, you'll see occasionally some shopping carts here and there, but by and large, most of them are in the carousel.

And nobody pays you to do it. And nobody pats you on the back because nobody's watching you. And yet, most of us do it. And so I think it's uncharitable, let's say, to characterize all of the operators in this state as being ruthless in their exercise of default options.

And this really aligns with my prior testimony about non-monetary considerations, when -- in deciding whether or not to improperly abandon a well.

If an operator is thinking, you know, about its community and about the impact that their decision is having on other people. I don't think that this is a ruthless unfeeling operator in every sense.

So that's something I think is important to keep in mind. Another comment that Mr. Peltz made in his testimony that I also agree with. He's testified that in his opinion, wells that are low producers exhibit a higher risk of orphaning than higher producing wells.

I think that makes a lot of sense. I mean I agree with that as well. From the standpoint that a low producing well is likely far into its economic life, is approaching the economic limit.

The decision to plug or abandon a well is likely going to be closer, rather than later, in comparison to a high producing well. And so on that basis, it makes sense that a low producing well would have a higher risk of orphaning.

However, Mr. Peltz appears to use this as some justification for the 15 percent threshold. Arguing that, in his opinion, it's not about bad actors. It's about portfolio risk. And that's why we have the 15 percent threshold, if I'm understanding it correctly.

I actually think that this might have the opposite effect though. And this goes back to what I was saying yesterday regarding non-bond related incentives for the operator to do the right thing.

And aside from the reputational costs and being a good member of society. If an operator has a marginal well, and he's thinking about abandoning it and shirking his responsibility.

He has to take into consideration not just the forfeiture of the bond, but also the threat to his continued ability to do business in the state. If that well is part of a larger portfolio of valuable wells, maybe higher producing wells.

If that operator shirks his responsibility, he's going to face threat of litigation. He's going to face potentially fines from the regulator. He's going to face potentially his ability to do business in the state (inaudible).

And that puts at risk, all of the future expected profits associated with those other valuable producing wells. And so even ignoring -- if we put that in a portfolio with other valuable assets, in my mind, that reduces the likelihood that that marginal well will be orphaned.

And so to the extent that the 15 percent rule discourages operators from incorporating marginal wells into larger portfolios. I think this may have the opposite of the intended effect.

On the topic continued comments on this 15 percent threshold. Mr. Peltz also offered a possible remedy for operators that wanted to avoid the 15 percent threshold.

Because the definition of marginal well is based in part on the number of days of production. It could be that the operator could speed up production. Perhaps produce more barrels of oil equivalent, or produce in more days during the year.

Now my response to that would be, if it were profitable for the operator to do that, then I would expect that operators would already be doing it.

These types of questions as to what is the economically efficient rate of production? It strikes me that the operator is in the best position to determine what that is.

And so to the extent that we are proposing a rule that is going to encourage operators to adjust their speed of production in order to meet some threshold affecting their financial assurance.

To me, that means we're encouraging production which is necessarily less efficient than the profit maximizing production. This is also similar to Mr. (Inaudible)'s testimony about how operators of gas wells may find it strategically optimal to curtail production during periods of low commodity prices, and increase production during periods of high commodity prices.

And I should add to that, that there's actually good -- this is actually good for society at large, if you think about why you have high commodity prices at all.

You have high prices for gas at times when gas is in high demand. And so it strikes me as this is the market doing its job. Encouraging operators to supply additional quantities of gas at specific times when it's most needed.

So again, I'm not sure that encouraging operators to speed up production in order to meet some threshold is an economically justified, or economically efficient, thing to do.

Lastly, this is in relation to Mr. Purvis's testimony, and I've heard it a couple times yesterday when he was in the room. The question of the expected 3,150 orphaned wells from the state's existing population of 63,000 unplugged wells.

And so this has come up. And in Mr. Purvis's testimony, he agreed that 5 percent of 63,000 wells would be 3,150 wells. If we assume that industry plugs 95 percent of wells, that means that we could expect of the current population, 3,150 would be orphaned.

The average plugging cost of $150,000 and this isn't an assumption. But at that average cost, that would imply a cost to the state of $473 million. I think I've got that math right.

Now that testimony was left there. And I would like to characterize that number, $473-million, a little bit differently. I want to think about it in terms of what that means on an annual basis.

Because of course 63,000, that's the number of currently unplugged wells in the state. Not all of those 3,150 will need to be plugged right now. They're not all abandoned now. In fact, some of those wells in that 3,000 won't be plugged for perhaps decades.

And so I want to think about what is that $473-million in terms of an annual expected cost? And we can do this pretty easily if we think about the average well life. Now this would take another assumption.

So we've got a couple of assumptions here. One is the 5 percent orphaning rate. The other is the average life of an oil and gas well in the state. Assuming average life between 20 and 40 years, we pick right in the middle, let's just assume an average life of 30 years.

Dividing $473-million by 30 years gives us $15.8 million a year. That is the expected PNA cost to the state from the 3,000 wells on an annual basis.

Now let's say that we can save this cost by implementing the proposed rule. And let's say that the majority of these 3,000 wells are in this marginal status. And there's a lot of focus on marginal wells.

And I think the proposed rules will likely make almost all of the -- probably all of the marginal status wells in the state economically unviable. They will be unprofitable to continue to operate.

So if we think about the lost revenue associated with those marginal wells, in order to get that benefit of saving $15.8-million a year, what do we have to give up?

So just rough back of the envelope math. According to my read of the EOCD's natural gas and oil production, this was downloaded on Friday, October 17th.

In 2024, there's about 1.3 billion barrels of oil equivalent produced. According to Mr. Purvis, .45 percent of that can be attributed to marginal status wells. Pretty small amount. Maybe in relative terms. 0.45 percent of 1.3 billion BOE however, is 5.85 million barrels of oil equivalent.

And I apologize, there's a typo on the slide. It should read 5.85, not 58. Assuming, and here's another assumption, $60 a barrel, which I think historically is about where West Texas Intermediate has traded around over the past couple decades.

At $60 a barrel, that's $351-million. $350-million of revenue from these marginal wells, which will almost certainly be prematurely plugged as a result of the proposed rules.

On an annual basis, assuming a tax rate of just 7 percent, that equates to about $24.6-million a year of lost tax revenue. And I'd like to point out here, I'm assuming a rate of only 7 percent, which is, I think, conservative.

I believe the current tax rate for oil is somewhere north of 8 percent. For gas, it's north of 9 percent. So this is, in my opinion, a conservative estimate of the amount of tax revenue we would be giving up on an annual basis, in order to save $15.8-million a year in expected PNA cost.

The assumption of average well life is an important one in this calculation. If we assume that average well life is just 20 years, then the expected cost savings associated with not having to plug those orphaned wells, increases to $23.7-million a year.

And yet, it still doesn't cover the lost tax revenue associated with those marginal wells, which again, will almost certainly be prematurely plugged.

This is all back of the envelope math.

However, I think it is a reasonable indication of the tradeoff here on an apples-to-apples basis. As opposed to just thinking about a single number, $473-million, I think we have to put it in the context of what we're giving up to achieve those savings.

I would also point out that none of this includes any royalty revenues associated with those marginal wells, which would increase the opportunity costs lost from plugging those wells even further, which would make these numbers even more negative. Thank you.

Q All right. Pass the witness for cross.

THE COURT: Thank you, Mr. Cloutier. Ms. Fox or Mr. Tisdel.

MR. TISDEL: Yes, Madam Hearing Officer.

CROSS EXAMINATION

BY MR. TISDEL:

Q Good morning, Dr. Arscott.

A Good morning.

Q I'm Kyle Tisdel. I'm an attorney with the Western Environmental Law Center and representing the applicants in this matter. How are you?

A I'm well, thank you.

Q Okay.

A Good morning. How are you?

Q All right, thank you. Thank you for showing

up again, on your second day here. You filed direct and rebuttal testimony in this rulemaking on behalf of IPANM, correct?
A I did.
Q And do you have your direct and rebuttal testimony with you?
A I do. I have my machine. I can pull it up. Would you give me a moment to do so, or?
Q Just want to make sure that you have it available. I'm going to walk through. I'll try to display what I'm referring to on the screen, but I just want to make sure that you have it with you if you need to refer to it.
A Okay. Yes, I do. I can get it.
Q And you were the author of that testimony?
A I was.
Q Okay. And have you reviewed the pre-filed direct and rebuttal testimony by other technical and fact witnesses in this case?
A I've reviewed the submitted testimony of Mr. Purvis. And I believe I've seen a few other submitted testimonials. Yes.
Q Okay. And I know you were here and heard the live testimony yesterday, but have you been able to hear any of the other hearing testimony?

A I have, not all of it. Certainly, Mr. Purvis's testimony. And I've watched a considerable amount on the YouTube channel, which I have to say is very convenient. So thank you to whomever is putting those up.
Q We all love YouTube.
A Yeah.
Q My kids included. Although, I don't think this is what they're watching.
A Yeah. We need -- we need OCD shorts.
Q Just at bedtime.
A Right.
Q Let's begin with the expertise you're offering in this rulemaking. You work at Applied Economics Consulting Group, providing economic and financial analysis, is that correct?
A That's correct.
Q And you've done that for the past two years, is that right?
A That's correct.
Q And as you described, your work has included a focus on economic analyses of various aspects of the oil and gas industry.
A Yes.
Q When in the course of your career, did you

begin working on oil and gas industry issues?

A Two years ago.

Q Okay. And the testimony that I'm just gathering from the sort of written direct and rebuttal, as well as the sort of slides you brought through.

It basically provides broad sort of themes of economic analysis to the oil and gas industry, but typically doesn't provide a detailed analysis of specific finances or economics for New Mexico, is that correct? Or is that a fair characterization?

A Of my testimony in general?

Q Yeah. It seems like it -- you know, you're providing broad economic themes of the oil and gas industry, but it didn't -- it didn't appear to do a sort of very specific analysis of oil and gas industry dynamics in New Mexico. Is that a fair characterization?

A I think it's fair to say that I did not do a full review of the market dynamic of the oil and gas industry in this state.

Although, as part of my work, I downloaded data on actual wells in New Mexico and used those (inaudible) produce Exhibits 8 and 9 that we looked at earlier.

And to look at actual wells in the state that would have been classified as marginal under the proposed rules.

Q Okay, great. I'm going to share my screen. Mr. Cloutier, I think you're still sharing.

MR. CLOUTIER: That's (inaudible).

MR. TISDEL: That's -- (inaudible) got -- sorry.

UNIDENTIFIED SPEAKER: Apologies. I'm getting out right now. I should be out.

BY MR. TISDEL:

Q No. That's fine. So I'm going to pull up -- okay. So we're just going to walk through some of your direct testimony right now.

So let's begin. You provide a chart at IPANM Exhibit 1 on Page 9 of your direct. And do you see that on the screen here?

A Yes.

Q So I'm going to scroll back up to Page 8, which sort of describes what you're depicting on that slide, right?

So you make the general observation that revenue from sales of oil and gas produced from a well declines over time as reserves are depleted, correct?

A Correct.

Q And you describe such revenues as net cash

inflows, correct?
A That's correct. It's the revenue from sales of hydrocarbons, less any variable costs. So if you think about your costs in terms of two buckets, you have some costs that you incur with the volume of production. So per barrel costs.
Q Yes.
A The fixed costs are the costs that you face every month invariant to the number of barrels you produce.
Q Okay. Well we'll get into that in a little bit more detail here in a moment.
A Okay.
Q But so a well, based on your chart and your testimony, a well has its greatest value earlier in life, and less value at the end of its life, correct?
A Under this example, you know, I think -- I think it's a more complicated answer to that question though when you consider tertiary extraction, and some of these other technologies.
I couldn't say for certain that there isn't a well out there that ended up having late in his life, an incredible boom in production.
Q Sure.
A So this is a sort of general picture of what I

think is reasonably typical.

Q And you walked through some of those examples of secondary and tertiary recovery yesterday. But by and by, right, a well is a depreciating asset. It has a decline curve, and that decline curve changes by well based on overall dynamics of that well.

But your chart here at 1, sort of just depicts a typical life of a decline curve on a well, is that correct?

A I would agree that this is my attempt to show a typical situation.

Q Okay. And based on this, you know, production is a useful factor when evaluating the economics of a well, correct?

A Is production a useful factor --

Q Yeah.

A -- evaluating the economics? Yeah. I think a well could be termed economic provided the cash generated from operations exceeds the costs of operating the well.

Q In your testimony, you described that while -- excuse me -- while variable costs fluctuate with production volume, fixed costs, or outflows remain more or less constant, is that correct?

A Correct. In this example.

Q Okay. And then at Page 9, you describe T which is on the chart as the point in which -- a point in time in which net inflows will drop below the level of fixed costs.

At which point, the well becomes unprofitable. And the operator has a strong economic incentive to plug and abandon the well. I read that correct, didn't I?

A I think you did.

Q Okay. So T becomes, in this chart, the sort of breakeven point for the economics of a well, correct?

A In this example, yes. And again, this is meant to sort of illustrate the mechanism. How the financial assurance can affect the economic life of a well.

Q Sure.

A There -- this point T shouldn't be looked at as an absolute time at which the well should be plugged. There is an option-like component to well value at this point.

It also precludes the possibility that, if we look at that declining curve for the net inflows, this assumes constant commodity prices just unchanging.

Q Yeah.

A And just for simplicity's sake, but let's say you're at T. If all of a sudden oil prices jump up $20

a barrel tomorrow, then all of a sudden, that entire curve shifts up. And T moves well to the right.
Q Yeah.
A So it's -- it is an indication of, just from a thought experiment perspective, about how to think about how fixed costs affect the economic life of the well.
Q Yeah. And that's essentially your testimony is this is a generalized theme of what happens. And obviously, the economics of any individual well. There's a variety of factors that come into play there.
But your testimony is that at that point, at that T, there's a strong economic incentive for the operator to plug at that point. That is your testimony, right?
A I would agree with that.
Q Okay. And you're familiar with the term paying quantities as it relates to well operations?
A I am.
Q And a well that is no longer producing in paying quantities is where the costs of operation exceed the revenues from production of that well, correct?
A That could be a definition. Is there a uniform definition of paying quantities that you're referring to? Because I think it may vary.
Q Well there's been a lot of testimony on paying

quantities in this case. But based on, again, your chart and testimony, we're talking in generality.

So I'm not trying to get into the specific economics of a specific well. I'm just trying to understand that point of T, right, is a point of -- this is useful for understanding sort of a paying quantities determination in a general sense, is that correct?

A Well it's useful in -- I think the definition of paying quantities there is a factor in determining T, if I understand where you're going with that.

And I would agree that it is a factor in determining T. But this is just an abstraction in order to try to put some -- try and illustrate how the level of fixed costs relative to net inflows, can affect the economic life of a well.

Q Sure.

A And to the extent that if you're going to define paying quantities as revenue from the well in excess of the cost of production, then that would be displayed here.

Q Yeah. And that's consistent with a lot of the other testimony we've heard in this proceeding so far. Is the cost of plugging and abandonment included in what you describe as the fixed outflow on this chart?

A It is.

Q So --
A I'm sorry. No, it is not. I thought you were talking about financial assurance costs.
Q Yeah.
A Let me restate. The PNA costs are not a factor in this chart at all.
Q Okay. That's what I thought. So PNA costs are costs that are additional to these operational costs, correct?
A That's correct.
Q And PNA is not factored into the economics of paying quantities determination, is that correct?
A Under the definition that you just gave. If we're just thinking about a comparison of operating profit, then that's correct.
Q Okay. So going back to what you describe as the point when an operator has a strong economic incentive to plug, or T on the chart.
That incentive is about whether the well continues to be revenue generating, is that correct?
A That's correct. If you have a well that in expectation, could continue to produce valuable oil and gas, and you could continue to produce at a profit, then yes. You would want to keep operating that well.
Q Okay. And as you said before, plugging and

abandonment is a cost that is external to the economics of operating a well, correct?
A   Have I said that? I don't think I've said exactly that.
Q   I think you just said that.
A   But so it's not a part of this picture, but --
Q   Okay.
A   Give me a moment to think about this. I would -- I will agree with you if you want to -- let's think about a hypothetical in this -- with this picture, where we can agree that the -- whatever the plugging and abandonment costs are, that they're independent of the operations of the well. I think that's a reasonable assumption.
Q   Okay. We've heard from other industry witnesses that funds to PNA are not set aside in their operations. Did you hear that testimony?
A   I have not.
Q   Okay. Okay. So referencing your chart at Exhibit 1 again. So if the externalized costs to plug and abandon a well were internalized, that would move forward the T in your chart to some earlier point in time, is that correct?
A   So that, I think, presumes that the current financial assurance costs are somehow deficient.

Q Yeah. I'm not -- I'm not talking about financial assurance. I'm just talking about the externalized costs to plug and abandon a well.
If those were internalized to become part of the operating expenses, that would move forward in time the T on this chart, is that correct?
A So I disagree with it a little bit. So I think -- I think this is maybe the disconnect. So the costs -- so when you talk about externalities.
Here's what I think, just in a general -- from a general standpoint. We want operators to fully internalize the costs of their activities.
And if a low producing well is producing an externality imposing a cost on society at large, not fully being borne by the operator. That would suggest that that is because the bonding requirement, for example, might be too low. If you would like to argue that.
So in the fixed outflow is the costs associated with financial assurance. And so this picture, to the extent that the fixed outflow incorporates the costs of financial assurance, maintaining that bond.
Then this absolutely incorporates the costs of what I think you just referred to as the externality of

the plugging and abandonment default.
Q Okay. So your testimony yesterday -- and this is IPANM Exhibit 2. This chart depicts the increased costs of financial assurance. That premium amount of financial assurance shifting forward in time. That T.
And so my question is, if the full costs of plugging and abandonment, not the surety premium. But if the full cost of plugging and abandonment were borne as an operational expense, that would also shift forward in time the T on your chart, or the breakeven point of the well.
A So it would in the sense that increasing the fixed costs, for any reason, would shift the T to the left.
But again, I think the issue is, if the bond -- if the bonding premium is appropriate to the actual specifics of the well, then the fixed outflow will incorporate the costs associated with not plugging the well, and leaving it in operation.
Because the threat to the state in terms of the potential externality from improper abandonment, is getting baked into the price of the financial assurance that the operator is paying on a regular basis.
My issue is, if we're going to impose a financial assurance bonding requirement that is

economically unjustified, it shifts that fixed outflow line up too much.

You could argue that the line should increase. But where I think we disagree, is on where the level of the financial assurance should be on a well by way -- well basis.

Q Yeah. But my question is not about -- I understand that that's what you're depicting on this chart. But my question is not what level of financial assurance is appropriate?

My question is, if an operator were to include the costs to plug and abandon their well as an operational expense, that would shift the T to an earlier point in time. And I think your answer is yes.

A So my answer is that those costs are effectively incorporated in the financial assurance premium. And I -- if I can --

Q Those were -- we agreed earlier those were two very separate things, correct?

A So if they're -- if they're different -- so can we pull up a slide from my testimony yesterday that I think would be helpful in answering your question?

Q Can we?

A Hope so.

Q Okay. Well what slide, Dr. Arscott, would you

like to pull forward? Let's actually -- we can leave it there. Let me actually move on, okay?
So let's look -- we're going to go down to Page 17 of your direct.
A Okay.
Q And that's pulled up on the screen. You see that?
A I do.
Q So you evaluate the effect of increased financial assurance under the proposed rules on vertical wells, is that correct?
A Correct.
Q And this was only wells -- only for wells you determined that would fall into marginal well status, correct?
A Correct.
Q So these are marginal vertical wells. And I -- you made very clear in your testimony, these are -- don't include sort of non-vertical or horizontal wells.
A I'm sorry. I get confused. Sorry to interrupt you. This is for Exhibit 8?
Q No.
A Or --
Q It is, yes. For Exhibit 8.
A Right. And so these would be for all

operators, not just the marginal well operators. So this is the entire volume of Envers Data vertical wells as of the last month in my data, which my data cut off in November 2024.

And so I'm -- I wrote a little code, and it's just sort of a series of ifs, ands, ors, looking at, you know, is this well a marginal well? Is it inactive?

And based on these various categories, determining the amount of bond required for that well under the existing and proposed rules.

Q Thank you for that clarification. I apologize. So these are vertical wells only, but not segmented by their marginal status, correct?

A Correct.

Q Okay.

A Although, the marginal status affects the calculation of the bonding amount.

Q Sure. Absolutely. And of the 376 operators of vertical wells, 61 of those operators had a single well, is that correct?

A I believe that's correct.

Q Okay. And so we're going to go down. And this is again, the sort of chart at IPANM Exhibit 8, correct? That we're talking about.

A Correct.

Q Okay. So at 18 to 19, we're still talking about this. But you state that large operators identified as having 51 or more wells, are likely well capitalized, and are better able to adapt to the proposed rules by plugging marginal and inactive wells. That's your testimony, correct?

A That is.

Q And while you don't do the math in your testimony, according to IPANM Exhibit 8 here -- well let me actually pull this up as a demonstrative. Give me one moment.

So just for demonstrative purposes, this is that IPANM Exhibit 8 chart that you provided. That -- and then the red is something that I'm providing just for demonstrative purposes. Just to be clear. The red is not what you've done.

A Okay.

Q Do you accept that?

A Yes.

Q Okay.

A So looking at this, you know, we can see basically the gap there that exists for -- if you just take, you know, the 61 wells, for example.

The $110,000 in the second column there is the difference between the existing bonding, and then the

average proposed bond. Does that make sense to you?
Q So, yeah. If I could just restate the -- so going from the right, the second most right column. The change in bond value. That's the difference between -- so for row one, that's the difference between $150,000 and $39,117.
A Correct.
Q Okay.
A Yeah. And that gets us to the $110. And then we multiply that by 61 wells, and we get the $9-million bonding.
Q So that $9-million you're saying is the amount of additional bonds?
A Bond (Inaudible), which is --
Q Yeah. This is very simple lawyer math. So --
A No.
Q And correct me if I'm wrong. I'm just taking wells -- the difference in the proposed and the existing bonding amounts, and multiplying that by the number of wells.
A I agree. Well without verifying it.
Q Yeah.
A But the way you describe it, that this is a calculation that you've made.
Q Okay. And the calculation, again, that I've

made. This is back of the envelope math, which you also referred to earlier. That gets us to, you know, $1.9-billion about. Do you see that?

A I do.

Q Okay.

A If I may, just to characterize this a little bit.

Q Okay.

A And I did touch on this. My first statement actually this morning was in regard to this.

Q I heard that too. Yeah.

A Yeah. So it's sort of interesting this came up. Let's focus in on that last row. The largest operators. You've got -- of your -- let's just -- you have $1.9-billion of additional bonds here. A full billion of that is coming from that last row.

Q Correct.

A So in my testimony that you just read, that the largest operators are well capitalized and are in better position to adapt to the proposed rules.

Q Right.

A This calculation, because it's only -- the calculation that I've performed, because it's only vertical wells. It ignores all the horizontal wells, directional wells, that these large operators have.

Q Yeah.
A Which means the $38,000 number that I've put there at the bottom, which is why I don't discuss it much in my testimony, other than to say those operators, I can't even begin to quantify what the actual bonding amount is on an average well basis.
Is because one, I don't have their horizontal wells in my data.
Q Right.
A Which means my code is putting some of those larger operators above the 15 percent threshold, which is what's driving that huge increase in the bond.
And so I would characterize that that billion-dollar number -- in fact, I would characterize almost all of that $1.9-billion as unreliable in terms of an estimate of what the incremental amount of bonds would be, as a result of the proposed rule.
Q Yeah. I don't disagree --
A Okay.
Q That that all of this is unreliable. So let's go back to your testimony. And so then we've got Exhibit 9, which is here. And this is the sort of magnitude of impact that bonding cost increase will have.
But this is only for the 61 operators of

single wells, is that correct?

A Correct. It's really more of a sensitivity table to show the varying effects depending on what the lease operating expenses are, and what the costs of bonding are.

Q Yeah, great. So your focus on these operators is because you considered these operators to be most impacted by the proposed rules, correct?

A I think that they would be the -- they would feel a disproportionately large cost from the proposed rules. Yes.

Q Okay. And according to your testimony at 21, these operators of vertical wells specialize in low margin assets.

And the increases in operating costs could immediately wipe out the economic incentive to continue operations, is that correct?

A That's my testimony, but I would -- I think I say likely specialize in.

Q (Inaudible).

A I'm not making a statement about every one of these operators. This is -- this is my experience from having interviewed six independent operators. Four of which were fairly small. And so this is informed from those interviews.

Q Yeah. We can certainly stipulate that all of your commentary is generalized, and not, you know, specific to an individual well.

And according to our conversation earlier, the economic incentive doesn't include the external costs to plug and abandon those wells, does it?

A So when you keep saying external costs to plug and abandon the well.

Q I might not be using the correct term of economic (inaudible). So I apologize. I understand externalized costs are different in the economic realm.

I'm just saying in terms of that first chart that you depicted. There's operational costs and plugging abandonment is outside of those operational costs.

A I would -- yes. I would agree with that.

Q Okay. And so is your testimony that the state should forego -- again, back of the envelope math here. But the $1.9-billion in financial assurance for the 61 vertical wells, because those wells may not be able to cover the costs of plugging abandonment?

A So could you repeat that question?

Q Yeah. So you basically agreed earlier that this chart just depicts the magnitude of impact for 61 single well -- operators of a single well, right?

And that operators of 51 wells or more, are larger operators that are able to internalize their costs. Does that sound right?

A Well --

Q And so the question is, is your testimony that for the benefit of 61 wells, that the state should forego the $1.9-billion of financial assurance that would result from your Exhibit 8?

A So that's not my testimony. I'm not saying that we should intentionally adopt a bonding requirement. To the extent that the bond is intended to deal with this judgment proof problem, right?

So we have firms that have limited liability. This creates a moral hazard where firms potentially, could engage in some fairly risky behavior. The costs of those risks could be borne by the public.

We want to make sure that operators fully internalize those costs --

Q Right.

A -- by coming up with -- there are various schemes, but let's just think in terms of bonds. I'm not saying that the state should forego bonds on all of the other wells held in portfolios owned by -- or operated by larger operators in order to save, if you want to characterize it that way, the smaller operators.

My testimony is really that a lot of the financial assurance increase is economically unjustified. And to the extent that it's too high for a number of wells, including wells operated by smaller operators.

That economically unjustified increase in financial assurance will put -- will have a distortive effect on the incentives to produce oil and gas in the state. And if I can -- if I can just expand on --

Q Yeah. (Inaudible).

A -- the -- what I think the appropriate bond would be when we're thinking about some of these larger operators that you just mentioned.

Those larger operators by definition have lots of wells. And to the extent that if I'm an operator, and I'm thinking about do I shirk my responsibility? Do I just walk away from this marginal well in my portfolio? Let's say, I'm just going to abandon it.

If I do that, I'm jeopardizing the -- my ability to continue operating in the state. Puts the future profitability for my other wells that I operate in jeopardy. I face potentially litigation.

Somebody could sue me for having abandoned this well improperly. There are lots of non-bond related deterrents to abandoning that well.

And so I think it's really about what is the appropriate level of financial assurance? I'm not saying that the state needs a certain bond amount in every situation.

In fact, the existing rules -- I think a lot of the economic justification for a blanket bonding condition, is that you have lower per average bond amounts per well, when you're talking about operators that have lots of wells. Because of the cross-collateralization issue that I was just describing, right?

Q So let's -- let's move onto this issue of bonding amounts and surety premiums. So on 19 of your direct, you discuss premiums on surety bonds, which you say range between 1 and 10 percent. You can see that on the screen?

A Yes.

Q And did you hear testimony, are you familiar with the testimony of (Inaudible) witness Emerick, who offered that premiums for small operators right now range between two-and-a-half and 5 percent?

A I'm not familiar with that testimony. That wouldn't shock me. My understanding is typical bonding costs are 2 to 3 percent.

Q Okay.

A Although --

Q and we heard from Mr. Armstrong as well. Yeah. I think he again was a (Inaudible) witness, but he stated that his had a 3.5 percent bond premium.

A Okay.

Q Would you accept that?

A Yeah. If you represent to me that that's what he said --

Q Okay.

A -- then, yeah. And again, that wouldn't surprise me. But there is a range now. I mean 1 to 10 percent, this is -- and I can't see the footnote here.

But this will have been from SuretyNow, I think, which is a website that offers surety bonds in the state.

Q Okay.

A And this is specific to New Mexico. There are other studies. Boomhauer, you can see later in this paragraph, Boomhauer in his -- in his study, he notes that he had noticed premiums exceeding 10 percent, all the way up to 15 percent.

I think those are likely uncommon. But the 10 percent bonding cost, I think, is a real cost faced by many operators in the state if they're posting cash bonds.

Because if you recall my testimony yesterday, I tried to make the case that the appropriate bonding costs on a cash bond, is really the operator's cost of capital.
Because I'm having to post cash now to satisfy a future plugging expense. And until I actually plug the well and get my bond released, that money, whatever it is, $150,000 whatever we assume it is. That's capital that's tied up that's not deployed into my operations.
Q Okay. So let's use the two-and-a-half to 5 percent range. So that would be a premium of between $3,750 and $7,500 per year. Again, lawyer math. But --
A That sounds right.
Q -- (inaudible) premium. And going back to your earlier testimony. These premiums would add to the fixed costs of the well, correct?
A Correct.
Q Okay. So at Page 21, you state that, considering operators of marginal wells likely specialize in low margin assets, that increase could immediately wipe out the economic incentive to continue operations for many wells, correct?
A Correct.
Q That was your testimony.

A That is my testimony. Yeah.
Q So if an operator cannot internalize the costs of the surety premium, they would not be able to internalize the costs for plugging and abandoning the well. Is that fair to say?
A So -- and internalize here. I think the issue is if the bond amount is economically justified, if it's set too high, those bonding costs are too high.
Q Okay. So the question is, if they can't pay the bond premium, then they couldn't pay to plug and abandon their well?
A Not necessarily. So for example, let's take a cash bond. So I may be operating a marginal well, it may be a low producer, but it may not be ready to be plugged for some time.
Let's say I'm not going to have to plug it for a couple of years. If I have to post a cash bond, there's a huge liquidity demand on me as the operator.
I have to come up with $150,000 to post now. And then in two years' time, I have to actually pay the $150,000 to plug the well, if that's what it costs.
And so from a liquidity standpoint, it's not whether I can afford to plug the well. There's a situation in which I can afford to plug the well.
But what we're talking about here in a cash

bond situation, is a liquidity demand of $300,000 which is double the amount to actually plug the well.

Q Okay. So but you said yesterday in your testimony when you were talking about cash bonds, that that was an extreme example, correct?

A The extreme is in relation to the cost. So the costs of financial assurance are extreme in cases of cash bonds. If --

Q How many operators do you know in the state right now, have to post in all cash bond?

A I do not know.

Q Okay. What types of operators have to post in all cash bond?

A I suppose any operator could elect to post a cash bond. But because it's expensive, I would expect that most operators would try to satisfy the financial assurance obligation in some other way.

Either with a surety bond or even a letter of credit. A couple of the operators that I interviewed were larger, and had revolving credit facilities that they could draw upon to issue letters of credit.

Although, in those cases, they elected to go to the surety bond market for their bonding.

Q Yeah. So for the typical operator in the state, like Mr. Armstrong for example, that pays a

three-and-a-half percent premium on his surety bond.
It would be cheaper to pay the premium than it would be to plug the well, correct?
A It would be cheaper -- sorry. So just to paraphrase, you're saying it would be cheaper to just pay the premium than to plug the well? Is that what you just said?
Q It is.
A So if I've got to pay a premium at three-and-a-half percent, right, of $150,000? That -- I don't know what the math is right offhand, but that's like $6,000, let's say.
Q So that $6,000 annual premium is less expensive for that operator than to plug and abandon their well. Even at the operator's average cost to plug -- excluding OCD's average cost to plug at $163,000. We heard a lot of testimony that operators are averaging about $120,000 to plug a well right now.
$6,000 annual premium is more advantageous to that operator than paying the $120,000 to plug the well. Would you agree with that?
A So I think if you're saying that $120,000 is more than $6,000, I would agree with you. But it's -- really, it's an economic question as to whether or not they decide to plug the well.

I mean if we're in a situation where the well is still producing, and you know, it's still economically viable. I have an economic incentive to continue production.

And in order to continue production, I have to satisfy the state's regulation that I maintain a bond. So my decision to continue paying that $6,000 premium, or whatever we had in our example, isn't necessarily a decision made based on the value of expected PNA costs and isolation. It's about, is the well continuing to produce?

Q   So let's talk specifically about small operators. And you talk about small operators starting at Page 22 of your direct.

And you state that the effects of the amendments would be most pronounced in wells for which the fixed costs of operation are large in relation to the net revenue generated from continued production. That's your testimony, correct?

A   Correct.

Q   And you state that stripper well operators survive through attention to detail, and a focus on costs, correct?

A   That is according to the operators I've spoken with.

Q That's your testimony though.

A Correct. But earlier in that sentence is the operators I have spoken with echo that statement.

Q Okay. Sounds good.

HEARING OFFICER: Mr. Tisdel, you have about five minutes.

MR. TISDEL: Okay.

BY MR. TISDEL:

Q So let's go to this problem with the -- your description before about a natural concern. So at the bottom of Page 22, you agree there is a natural concern with what you describe as an exploitation of the judgment-proof problem, i.e., financially distressed firms operating assets that would not be economically viable, but for the failure to fully internalize the costs of their actions. That's your testimony.

A It is. And I apologize for how wordy that was.

Q That's okay. And you say it would be unfair to characterize all small and independent operators as such. Yes?

A Correct.

Q And so by inference, some companies do operate with an intention to exploit the judgment proof problem, correct?

A I can't state that there are. But my belief is that there are -- it's very likely you're going to have bad actors. I would characterize that type of operator as a bad actor. I think --

Q And those do exist.

A I think they do.

Q Okay.

A I think they do. And -- which is why I think, you know, in terms of a policy prescription, just in general, I think it's probably best to come up with a policy that presents operators with an array of incentives that entices bad actors to behave like good actors.

Q Okay. And then at the bottom of Page 23, you conclude that for small independent operators, the financial assurance requirement is likely more important than addressing the moral hazards of limited liability.

A That's --

Q (Inaudible) your testimony there?

A That is correct. And it relates to what I was remarking on Mr. Peltz's testimony, about the portfolio risk problem.

The fact that the individual default likelihood for a marginal well, such that it's higher than it is for a higher producing well. If that -- as I believe, that the likelihood of orphaning decreases for a well when it's incorporated into a larger portfolio. Then, yeah.

I think the non-bond deterrence to shirking responsibilities and abandoning wells. Those non-bond incentives become more important for larger operators. And therefore, as you get smaller and smaller portfolios for smaller operators, the bond becomes more important.

Q Okay. The sale of oil and gas wells is quite common in the industry. Do you agree with that?

A I agree.

Q Yeah. Let's go quickly to your rebuttal testimony. This is at 3. So you introduced the economic concept of the time value of money, which is the general idea that the value of a dollar today, is worth more than the value of a dollar tomorrow, correct?

A Correct.

Q And you provided some oral testimony on this. And so the example that you provide, is that a dollar deposited in a risk-free savings account at a rate of 5 percent, would grow to $1.05 in one year, correct?

A Correct.

Q And so you provided in your (inaudible) rebuttal, a number of supplemental exhibits. Exhibits 32 to 34, that showed the added value of early investment, right?

So allowing a lesser amount of money. I think in Exhibit 32, you had $15.5-million invested, yielding $25-million. And you suggested that that early investment would pay for the eventual plugging of those wells, correct?

A Under those assumptions, yeah. And one of those assumptions is a 10 percent discount rate.

Q Yeah. And as we discussed earlier, operators survive on attention to detail. And the operators of more marginal or low producing wells, survive on attention to detail and focus on costs, correct?

A That's my understanding.

Q Yeah. And you would agree that there -- that there are many such operators in New Mexico that focus on such wells as their sole operations. Those marginal or stripper wells as they're defined in your testimony.

A That is my understanding.

Q And did you hear the testimony of Mr. Armstrong when he said that his company did not set aside funds to plug?

A No, I did not.

Q Did you hear him say that this was a common practice in industry?

A No, I did not.

Q Do you agree that it is not atypical for a operator to not set aside costs to plug and abandon their wells?
A I don't know if it is or isn't. I know SEC -- sorry. I know SEC regulations, if you're a publicly traded company, have certain requirements for valuing -- a fair valuation of asset retirement obligations.
Q We're talking about really small operators.
A (Inaudible).
Q So those are probably not subject to the SEC.
A Almost certainly not, which is -- but -- which is why I said initially. I'm not sure one way or another --
Q Okay.
A -- because I don't have that information.
Q Okay. So one last question. So based on our earlier discussion when you said that a marginal well operator could not afford to cover the costs of their surety premium.
But let's assume instead that they would invest that 5 percent surety premium, which at the high end, would be $7,500 right? So a 5 percent rate of return would yield $375.
A If you represent to me that that's the case -- okay.

Q Okay. So in terms of time value of money, that is a lot of years of investment to pay for the plugging and abandonment costs. Let alone remediation of a well site, do you agree?

A Yes. Although, the slides that we're looking at here, the one you referenced where you set aside $15-and-a-half-million and end up with $25-million.

The reason why we've assumed a 10 percent discount rate, is because it's not that you set aside this money in the bank. It's you redeploy it into operations, where you earn a rate of return of 10 percent.

Q But you said a stripper well operator, which I think is defined as 10,000 -- or 10,000 BOE, right? You said that these operators survive on costs reductions and attention to detail.

So in that scenario, right, those operators of low producing wells, do not have money that they're setting aside for plugging and abandonment, let alone investment.

A I don't know if they are or aren't. I'm not sure.

Q Okay. Thank you. No further questions.

HEARING OFFICER: Thank you, Mr. Tisdel.

MR. TISDEL: Thank you, Dr. Ascott.

COMMISSIONER GREG SIMPSON: We need a break. Let's come back at 10:55.

(Off the record.)

HEARING OFFICER: Let's come back from the break, please. See we move now to Mr. Tremaine or Mr. Hall.

MR. TREMAINE: Good morning, Madam Hearing Officer. I'll let Dr. Arscott get settled.

CROSS EXAMINATION

BY MR. TREMAINE:

Q Good morning, Dr. Arscott. Welcome. My name is Jesse Tremaine. I'm in the legal director for the oil conservation division. I hope you're well this morning.

A I am, thank you. Good morning to you.

Q I have a few questions for you, just -- far fewer than I -- than I usually ask. So just to start out, your testimony indicates that you interviewed six independent operators, is that correct?

A Correct.

Q Okay. Do you know how many total operators there are in New Mexico?

A I don't have an accurate count of the number of active operators in New Mexico. No.

Q (Inaudible) hundreds?

A It would be hundreds.
Q Okay. Do you know how many IPANM member operators there are?
A I do not.
Q Okay. How did you pick who to interview?
A They were companies that had come forward and were willing to discuss their operations.
Q Were those companies also witnesses in this case?
A I'm not sure. They may have been.
Q Okay. I want to ask you a couple questions about slide 12. I'm going to share screen here. That's not working. No. Bear with me. All right.
So I'm going back to your witness slides on slide 12. I just want to clarify. So this talks about BOE. Did you incorporate 180 productive days in this analysis?
A Yes.
Q You did.
A Yes.
Q Okay. Thank you.
A So this is based on the definition under the proposed rule, which is, I believe, less than 1,000 barrels of oil equivalent per year. And fewer than 180 days.

Q Thank you. I just wanted to clarify that because the slide didn't state it. It just listed BOE. But thank you for that clarification.
I want to move on to slide number 24, where you spent some time talking about the opportunity for investing. Is this -- would you agree that this is an example of responsible investment by a prudent operator?
A So I think it could be. I mean this is really just a characterization of a hypothetical example.
Q (Inaudible).
A It may not even be a well. It's meant to sort of convey the time value of money. And --
Q Thank you, Dr. Arscott. That answered my question. If all plugging operators did incorporate this, and comported with this example historically, we might not having -- be having this discussion, would we?
A I'm sorry. What --
Q I'll move on. Dr. Arscott, there's no rule that requires operators to invest their revenue prudently, is there?
A I'm not sure if there is. And there's no rule that requires operators to reinvest the profits from the development, or the production of marginal wells, in the drilling or development of new wells, is there?
A I'm not aware of any specific rule other than

the operator's own profit incentive to maximize the value of his operation.

Q Thank you, Dr. Arscott. Would you agree after sitting through and listening to this hearing, that the financial assurance statute requires the division to establish categories of financial assurance?

A I believe that they're already under the existing rules, categories based on inactive or --

Q So your testimony is that, yes, those already exist. So, yes. You agree with my statement.

A Yes. There is categorization. Yes.

Q Thank you. Would you agree that that statute does not permit the division or the commission to mandate prudent investment by operators?

A I have no opinion on that.

Q And similarly, that statute does not permit the division or the commission to mandate operators reinvest revenue into their operations. Would you agree?

A I have no opinion on that.

Q Thank you. The hypothetical described on slide 24. This hypothetical does not -- would you agree that this hypothetical does not account for real life situations where the -- where a prudent operator did in fact invest money for plugging their wells, but then sold those wells to another operator?

A I mean the hypothetical you've described is certainly possible, I suppose. But it's nothing to do with this example here that's meant to show the time value of money.

Q Okay. Right. And what I'm getting at, Dr. Arscott, is that your hypothetical example of the time value of money, is not representative of real-world operations.

Where whether or not the first operator saves money from the revenue, once they sell the wells, that invested money is no longer available to the next operator for plugging.

A You're -- I think you're sort of -- you're adding in this additional element about a sale. A hypothetical sale to another operator. And that -- this example says nothing about that.

I mean this is a real-world example of how financial markets work.

Q Well my example -- my question to you, Dr. Arscott, was about applying your hypothetical example of the time value of money, to real world transactional realities, which you just testified in response to Mr. Tisdel, that are commonplace in industry. So that's what I was trying to clarify, but I can -- I can move on.

Does -- Dr. Arscott, does this hypothetical account for minimally or under -- minimally capitalized or undercapitalized operators that are impacted by normal life occurrences?

A This says nothing about the capitalization of operators.

Q Okay.

A This is a hypothetical to illustrate the time value of money.

Q Okay. And would you agree that an otherwise prudent, reasonable operator, who's going about their business the right way, small company. They have a heart attack, they get cancer, they get in a car accident. The situation does not apply to them?

In those situations, there are other life factors that would limit their ability to invest -- or save, invest, or reinvest in the company. Isn't that true?

A Dead people cannot invest.

Q Thank you. It similarly does not take into account -- like this hypothetical savings or reinvestment does not take into account instances of the bad actors, like negligent management, or intentional misuse of funds. Would you agree with that?

A This hypothetical has nothing to do with bad actors. It doesn't say anything about bad actors.

Q Okay. You talked in your direct testimony quite a bit about -- and I'm paraphrasing here.

But the idea that the specter of increased financial assurance costs could lead operators to plug wells instead of incurring those potential financial assurance costs. Would you agree with that?

A I would agree that especially in regard to this 15 percent threshold, that an operator who's facing paying $150,000 per well on a large portfolio of wells, because of a handful of marginal wells, yes. They have, I would argue, a very large incentive to plug those wells prematurely.

Q Okay. So let me make sure I got that right. Thank you for that clarification, Dr. Arscott. So the incentive to plug wells rather than -- rather than put up additional (inaudible), is a stronger incentive for operators under the -- what I'll call the portfolio disqualification, from (inaudible) bond eligibility.

A So it's all rooted in the idea that the financial assurance should be, at least in theory, tailored to the expected cost of default and the likelihood of default. To the extent that you --

Q Thank you, Dr. Arscott, but that was not my

question. I think the record's clear there. So let me just move on to see if you -- it seems to me that you are testifying that if this rule were promulgated, it might cause operators to change their behavior?
A   I think that's fair to say, yes.
Q   Okay. But all of your analysis assumes that operators will change their behavior in (inaudible) or a trend of premature plugging.
Yet we've heard numerous examples in this hearing, and I would submit for the record that all of the examples that have actually been discussed at the hearing, are wells that could avoid marginal well status through prudent and active management. Did you hear that testimony?
A   I'm not sure if I did hear that testimony. Although, if we're referring to speeding up production, I don't know that that's prudent, or at least it's not an economically efficient way of operating necessarily. If we're simply speeding up production in order to meet some 15 percent threshold.
Q   Okay. You did not provide an analysis of the behavioral changes that operators would engage in that would actually improve production, did you?
A   None other than a discussion of the economic incentives faced by rational actors.

Q Thank you. Did you quantify the number of wells that would be plugged, versus the number of wells that would increase production?
A I did not.
Q Okay. Dr. Arscott, are you aware that in New Mexico, we're drilling approximately 2,000 new wells per year?
A That sounds right.
Q Okay. So you testified as to the number of wells. A lot of examples have been thrown around, but using this 5 percent threshold.
So we're drilling -- if the status quo remains and we're drilling 2,000 new wells per year, you would agree that we're adding 100 new eventual orphans per year.
A I think mathematically, if you assume that there is an orphaning rate of 5 percent, if you add 2,000 wells, yes.
Q Okay. The -- you spoke at some length about -- with Mr. Tisdel about Exhibit 8. And I just want to verify with you that if the 15 percent marginal well threshold were modified to -- and I don't have that up on the screen. I didn't change the screen, Dr. Arscott. So --
A It's okay.

Q I can -- I was just referring to it generally, so.
A That's fine. I have it on my laptop.
Q I thought you were looking at the screen. No problem. I'm getting to the end here. I just want to verify that if we change the 15 percent to 30 percent, or you change that 15 percent disqualifier to another form of noncompliance of wells.
That that analysis would necessarily change and it would impact a different number of wells.
A It would -- the analysis would change. Although, it doesn't -- changing the threshold itself does not change the problem from an economic standpoint that this threshold would potentially lead to a financial assurance burden on high producing wells, for which the likelihood of orphaning is low.
And so it gets to this basic premise that from a theoretical standpoint, the ideal amount of financial assurance should be tied to the likelihood of orphaning, and the costs of plugging and abandoning wells.
Q Thank you, Dr. Arscott. Will you agree as a -- as an economist that unforeseen conditions could cause operators to become insolvent and possibly file for bankruptcy?
A That is plausible.

Q And would you agree that unforeseen or future market conditions would necessarily change your analysis?

So for instance, if something completely outside the control of the state of New Mexico, the division, the commission, anyone here, causes the price of crude to drop substantially. That there's an increased risk of operator insolvency and bankruptcy?

A I think if you reduce the revenue generating potential of any business, the risk of insolvency would increase.

Although, are you describing more of like an emergency? Some unforeseen emergency?

Q I'm just asking you if as an economist, you can -- you can acknowledge that future market conditions of various different types, could cause operators to become insolvent and or file for bankruptcy?

A Well if we're talking about future market conditions, then I think every operator every day, or every business person, is going to look out into the future and make a forecast.

In this case, I'm going to have a forecast of where oil prices are going to go, for example. And there's good data points to look at there. I could look at the (inaudible) strip, for example. We can look at futures pricing.

And I'm going to look at that, and it's going to inform my business decisions, you know. Do I decide to drill a new well this year? Well a necessary component of that analysis is where I think oil prices are going.

What I -- what I understood your initial question to mean, was that there's some unforeseen, unexpected, catastrophe, right? Which is why I was asking to clarify if we're talking about an emergency.

Because I don't think an unexpected drop in oil prices would constitute an emergency, but.

Q So you're -- okay. So you're contesting that -- are you saying that you don't foresee a drop in crude oil prices, absent some emergency situation?

A No. I'm saying that people have forecasts as to the future evolution of oil and gas prices. The fact that those oil and gas prices will often be much higher and much lower than our forecast, doesn't affect the likelihood that I face default today, right? Or that I face insolvency today. If we move forward in time --

Q Well Doctor --

A -- and we realize --

Q Let me move on here, Dr. Arscott, because I didn't ask you about changes in your projections for

your business. I asked you about changes in marketing conditions.
So for instance, my understanding was that the price of oil changed because Russia invaded Ukraine.
A Okay.
Q Right? So world events happen, it impacts the price accrued. If the price of accrued tanks for whatever reason, more operators are at risk of insolvency and or bankruptcy. Can you agree with that basic premise?
A So as a basic premise, yeah. If you -- yes. If you reduce the amount of revenue generating potential a business has, all else equal -- holding all else equal, the threat of insolvency increases. Yes.
Q Okay. Thank you. So if you factor in unknown future unknowns, and the fact that the price of commodities doesn't -- we have seen instances of changing over time.
Wouldn't you agree that the scope of potential orphans that we've discussed, is actually more representative of a floor than a ceiling?
A No, I wouldn't conclude that. I don't think that would say anything about whether there's a floor or a ceiling.
Although, in terms of your example, right? A

shock to commodity prices, to the extent that it lowers how much I can earn from selling my gas. It probably makes sense for a prudent operator to stop producing gas and wait for a higher commodity price environment.

Q All right. Thank you, Dr. Arscott. Pass the witness.

HEARING OFFICER: Thank you, Mr. Tremaine. Mr. Biernoff or Mr. Moore? Mr. Graeser.

MR. GRAESER: Thank you. I seem to be having a camera issue, so I apologize for that. Yes. It's back to me for a little bit.

CROSS EXAMINATION

BY MR. GRAESER:

Q Dr. Arscott, I'm Chris Graeser. I'm with the New Mexico State Land Office. Let me start with your discussion -- sorry -- I was trying to share the screen. It doesn't look like it shared, did it?

A I can see it.

Q Okay.

A I can see the IOGCC plot.

Q Yes, thank you. You know, on the topic of falling oil prices and discussion of costs. This slide shows a more than doubling of documented orphaned wells between 2019 and 2021.

Couldn't that be related in significant part to the COVID 19 pandemic and significantly lower oil prices during that time?

A So could it be possible that there's a confounding factor related to COVID-19, or some other geopolitical events that happened around this time?

I suppose anything is possible. To me, the most likely reason is the Department of the Interior's grant program being announced around this time. Because that is directly related to states counts of documented orphaned wells.

Although, I would not represent to you that I know that with certainty. It appears to be likely based on the timing of this increase.

Q And oil was as low as -- well negative at some point, and down around $49 a barrel during this time, right?

A Yeah. So it's true oil became negative on April 20, I think, 2020. But that was related to some very unique circumstances driven by the financial market, not the -- not the actual physical market for oil and gas.

The negative oil price resulted from speculators, pure financial speculators, in the market for WTI futures that got caught out with some long positions without the appropriate quantity of storage capacity in Cushing.

So it's a very unique, and sort of one-off oddity, in terms of prices. I think the next day, the price jumped back up to about $10, or a little over $10.

Q Okay. And even more than that, at like say $49, where it was for longer. Your testimony is that that's only potentially a confounding factor. You wouldn't see that as a significant factor in --

A Well --

Q -- documented orphaned wells increasing?

A Well I would say that oil prices are extremely volatile, and we've seen lots of wild swings in oil prices over the years. But this goes back to 1992.

I'm sure if we were to plot the volatility in in WTI against these counts, I think we could see that there's probably no correlation, but I haven't done that analysis.

But that's the analysis you would have to do in order to rule that out.

Q Right. But you agree with me there was a significant, more than doubling between 2019 and 2021, during the pandemic, right?

A According to this plot here. But again, I think that's -- I mean it says in the title, it's published documented orphaned wells. It's not orphaned wells, it's documented, which I think is the key word there.

Q Okay. And didn't the state land office do a rule during this time on temporary abandonment (inaudible) because of that price of oil?

A I'm not sure.

HEARING OFFICER: Mr. Graeser.

MR. GRAESER: I'm sorry. I lost you there.

BY MR. GRAESER:

Q Mr. Arscott, in your rebuttal, you referred to the term cash bond, correct?

A Correct.

Q And you're aware that Oil Conservation Division allows an assignment of cash collateral, correct?

A I believe that's correct.

Q All right. And under an assignment of cash collateral, the principle in the account would be held for OCD's benefit, right?

A Sorry. Can you say that one more time?

Q Yeah. The -- when you're using an assignment of cash collateral, the principle in the account, in other words that cash, is held for the OCD's benefit, right?

A That is my understanding.
Q Okay. So whatever the commission sets the bond amount at, that amount would be the principle in that account?
A I believe that's how it would work.
Q Thank you. So but the interest on that principle, that doesn't go to OCD, right?
A No. But it's not really interest on that cash. It's the opportunity cost of capital. So the cost is really --
Q Well that -- so that -- but that's not what I was asking. But the interest does not go to OCD, right?
A I'm not sure. Like if you represent to me that it doesn't, then it doesn't.
Q Well let's see. We can --
A I don't know one way or another.
Q We can pull up the assignment of cash collateral form. So at (inaudible) -- this is the assignment of cash collateral form. It's actually on OCD's website right now.
And if we look at stipulation 6, please read that.
A Operator principle retains no right, title, or interest in the account, except the right to interest, if any, and the return of the account, or such balance

as exists following the division's release of the cash bond or portion thereof.

Q So is it fair --

A (Inaudible) --

Q -- to read this that the interest could go to the operator or principle, not OCD?

A That's true. But I think the -- and my reading of this is I think that is correct based on what I just read. But my question would be, what is the cash deposited in? What is the rate of return?

Q Right.

A I mean the operator's rate of return is 10 percent.

Q (Inaudible) stipulate that, right? I mean if you want to take a full look at this, it doesn't say what kind of account it has to be in, does it?

A I'm not sure. I haven't read it. But I doubt --

Q Well let me ask that question broader. Do you have any reason to think that it somehow limits the type of account that the operator or principle can invest that money in?

A I do. I would expect that the money would be held in a very safe asset. Probably in securities as close to risk free as possible.

And those securities offer very low rates of return. And so, if for example, you take the collateral, and you deposit it in a portfolio of treasury bonds that are paying 4 percent on average. Yes.

The way I read this, you would be giving the operator back its, for example, $150,000 bond principle. Plus interest on that bond that had accrued over time at a rate of 4 percent.

And yet, the operator's cost though reflects a rate of return of 10 percent. So for the entire time that the --

Q All right. But the -- but -- let me stop you there.

HEARING OFFICER: Mr. Graeser, hold on.

MR. GRAESER: Yes.

HEARING OFFICER: Let's not talk over each other, please.

UNIDENTIFIED SPEAKER: Yeah. And if we could stop interrupting the witness, please.

HEARING OFFICER: Yeah.

BY MR. GRAESER:

Q So just finish quickly. If the operator's cost of capital is 10 percent, and you only give them 4 percent back on their money, they're still out a difference between those two interest rates. There's a difference in the costs for the operator.

Q Right. The rule doesn't specify what kind of account though, right?

A Again, I'm not sure. I haven't read this entire form.

Q Okay. Do you have any reason to think it specifies that it has to be in a particularly safe or unsafe account?

A Again, I have reason to suspect that it should be held in a safe account. Otherwise, you'd be putting that money at risk. I mean you could invest that in Bitcoin. I wouldn't -- I wouldn't recommend that.

Q Well nor would I. But you don't have any reason to think that that's required, do you? That's my only question.

A That it's required -- well again, I have reason to suspect that a -- that those monies would be held in a safe vehicle.

Q Okay. So let -- let me move on. I think we've hashed that out. So you wouldn't need to post cash, or assignment of cash collateral, or a bond, until a well is -- until an individual well is deemed marginal. Whatever the definition of marginal is, correct?

A So my understanding is that a bond is always needed. Are you -- are you talking about the -- the proposed rule requiring an additional bonding requirement at that level?
Q Correct.
A Then, yeah. My understanding --
Q (Inaudible).
A So, yeah. For a specific well, my understanding is once a well migrates into marginal status, as it's defined in the proposed rule, then it would be subject to additional financial assurance.
Q Right. And -- but that's typically not going to be needed, like from day one over the entire span of the well, correct?
A Well I would -- I would hope that a well at day one is not a marginal status. So probably not. But there is this question of the 15 percent threshold that if I did have a brand new well, and it happens to be in a portfolio with more than 15 percent marginal wells, then yes.
That brand new well from the very beginning of its life, would be subject to the highest financial assurance categorization.
Q Understood. But as long as we're below that threshold, that well doesn't need the additional bonding

until it's marginal, right?
A That is my understanding.
Q And that could be 20, 30, 40 years or whatever, correct?
A Possibly.
Q Okay. Thank you. I appreciate your time. I don't have any other questions.
A Thank you.
HEARING OFFICER: Thank you, Mr. Graeser. Let's see. I don't -- I think we have Ms. Nanasi. Mr. Maxwell, do you have questions of Dr. Arscott?
MR. MAXWELL: I have no questions. Thank you very much.
HEARING OFFICER: Thank you. Mr. Rankin, any questions?
MR. RANKIN: None for me. Thank you, Madam Hearing Officer.
HEARING OFFICER: All right. I believe EOG is monitoring. Mr. Suazo, do you have questions?
MR. SUAZO: No questions.
HEARING OFFICER: Mr. Cloutier, do you have any redirect?
MR. CLOUTIER: I think I've got three, Madam Hearing Officer. If I could have Ms. Tripp have access so she can pull up OCD Exhibit 29.

REDIRECT EXAMINATION

BY MR. CLOUTIER:

Q This is OCD Exhibit 29, Dr. Arscott, that -- as I appreciate it as the list of all financial assurance that has been posted with the division for oil and gas well activity.

And Ms. Tripp is going to go into the column J and select cash and letter of credit. And could you just run a count for us, please, Ms. Tripp? So 400 --

MS. TRIPP: 488.

BY MR. CLOUTIER:

Q 488 which may include the very top row. Number -- line number 1, which is the headings. So knowing that there are over 480 instances of cash or letters of credit posted as cash -- as bonds for the OCD, according to the OCD's records, does that change your answer to any of Mr. Tisdel's questions?

MR. TISDEL: Leading.

MR. CLOUTIER: Pardon me?

MR. TISDEL: I'm objecting to leading.

BY MR. CLOUTIER:

Q How would you, if at all, testify differently to Mr. Tisdel's questions?

A Well I think Mr. Tisdel asked me the number of operators in the state that had cash bonds. And so if I had this data up in front of me, I think I would've been able to give him an accurate count.

Which in this case for cash and letter of credit, it looks like 487.

Q And I will, in fairness, state that I think some operators are listed on here multiple times. So it's not -- may not be a perfect accurate operator count. Two other questions, please.

When an operator is considering drilling a well, and projecting owning the well over its life, in what stage of the process is the operator planning for the end of life plugging and abandoning costs?

A Those expected plugging and abandonment costs should be incorporated at the very beginning. So if I'm conducting a financial analysis to determine whether or not it makes sense to drill a well, I'm going to think about my cash flows, my capital expenditure initially. My initial cash outlay to drill the well.

I'm going to think about my expected cash flows from operating the well for a period of time. And then I'm also going to think about my expected asset retirement obligation, which will represent a negative cash flow at the end of the projected life of the well.

Q Right. And same question, except this time presume an operator who is considering the purchase of an existing producing well.

A   It is the same analysis minus the drilling. You can replace the drilling capital expenditure, the initial outlay, with the purchase of the well.

Then I'm going to model out the expected cash flows from operating the well until I think the well will reach its economic limit.

At which point, I will project out the projected costs of the asset retirement obligation. All of that feeds into the net present value calculation that informs the amount that I'm willing to pay for the well.

Q   Thank you. Just one last question. You were interrupted a couple of times. Was there anything you wanted to tell the commission that you thought was useful, that you were prevented from saying?

A   No.

Q   All right. No further questions, Madam Hearing Officer.

A   I wouldn't dare.

HEARING OFFICER: All right. Let's move to commission questions. Commissioner Ampomah, do you have a question?

COMMISSIONER WILLIAM AMPOMAH: Yes, I do. Ms. Tripp, is it possible to bring up the direct testimony of Dr. Arscott? Thank you. Okay. So I will probably prefer the slides. Yeah. The witness slides, yeah. Thank you.

Let's start from slide number 5. Dr. Arscott, thanks so much for your testimony today. And I will start from slide number 5.

So here you're saying that from the first point, you're saying OCD's plug in costs do not reflect typical well. You go on to talk about a significant variation in expected PNA costs.

So these examples that you've provided, my question to you is, are they in the active or inactive work categories?

THE WITNESS: I don't know that the inactive or active status is in each of these data sets. I can tell you one by one. If we go from under the heading, Significant Variation in Expected PNA Costs, that Ramey et al study, is a recent study.

It is the best one I could find on trying to project or predict what the plugging costs would be for a well based on observable factors. So this would include the age of the well. It includes the vertical depth, it includes elevation, which state the well was in. New Mexico is one of those states.

In fact, this range, 8,000 to 1.1-

million, is specific to wells in the study in New Mexico. And I don't recall whether there was an indicator variable there for inactive status or not. I suspect that no, there wasn't.

The Texas Railroad Commission's statistics, I don't believe delineate between inactive versus active wells when they're plugged. But this is more just to show that there is significant variation in the expected costs.

And given that the -- at least the economic theoretical ideal amount of financial assurance, if we were trying to figure out well, what's the right amount? It's really well specific because part of that determination is, what do I think the actual cost of plugging this well will be?

My understanding is the preexisting rules for a single well bond is a function of vertical depth. And that is something that is statistically significant. It's a significant predictor.

In fact, this Ramey et al study, if memory serves, for every 1,000 vertical feet, the cost of PNA-ing the well went up 20 percent.

COMMISSIONER WILLIAM AMPOMAH: So based on these three options, or let's say based on your studies, extensive study on this problem. Then let me ask you the level of appropriate bond that you can suggest.

THE WITNESS: So again, the theoretically like ideal amount of financial assurance, if we could perfectly predict what the cost of plugging a well would be, that would give us excellent information in determining what the right amount of financial assurance is.

Just as a practical matter, it's -- that is impossible to know in a lot of cases, right? And so -- which is why I think -- you know, when you think about the existing rules, there is a match to some extent in terms of how the existing rules are set up with what the theoretical ideal is.

For example, vertical depth correlates positively with the costs of plugging a well. And so to the extent that you make the financial assurance a function of vertical depth, you're at least moving toward that theoretical ideal amount.

The blanket coverage also takes into account the other non-bond deterrence that operators face when deciding whether or not to shirk their responsibility.

If I'm an operator and I'm thinking about orphaning a well, I have to think about what is the effect of having doing that on the ability that I have to operate my other hundred wells.

And so if I'm an operator with a large portfolio of wells, it makes sense that the bonding amount on a per well basis be lower than the expected costs of plugging and abandonment.

COMMISSIONER WILLIAM AMPOMAH: So sir, thanks for the information. And I think this has been the continuous response from other experts as well. You know, the applicant and OCD really presented their case, showing the commission as to why they believe the 150,000 has to be the number, right?

So experts from IPANM and also (inaudible) are telling us about the risk base, the risk base, the risk base. You know, but I mean, it's difficult for us to be able to put a handle on how the commission, how we should react.

You know, we just have only one number now, but I don't think we do have another number from the other side, you know, to really compare. So you can appreciate why I'm asking you what should be the correct bond based on all the work that you've done.

THE WITNESS: So and I sympathize. It is --

COMMISSIONER WILLIAM AMPOMAH:

(Inaudible).

THE WITNESS: -- as I said. So and I'm talking a lot about theoretical ideal amounts, right? That's really just as a guide for how to try and implement a feasible policy, right?

Because obviously, you can't see into the books of every operator. You can't -- you can't know exactly what type of casing issues are associated with the well.

And you know, all these other various factors that are going to bear significantly on what the cost of plugging a well will be, which is why I'm being somewhat -- somewhat high level of that in terms of, you know, knowing what we know about what the theoretical ideal amount is. How should we craft a policy that tries to get as close as possible to that theoretical ideal in a feasible way?

And that's where I base my comments on the preexisting rules. If you have a single well bond based on vertical depth, vertical depth may be a noisy proxy for the expected costs of plugging a well. But it at least is a positively correlated variable with plugging costs.

And so my real objection to the $150,000 sort of flat across various wells, is that it ignores all of this heterogeneity that exists in plugging costs. If we're going to choose $150,000, or any number, based on the modal or mean cost in some distribution, we are by definition imposing a higher than economically justified bonding amount on at least half of the wells.

That will create a distortion for the incentives that producers have to continue producing oil and gas.

COMMISSIONER WILLIAM AMPOMAH: Thank you. Let's move on to slide number 8. So in slide number 8, and even in slide number 9, you presented some examples looking at, let's say, an operator with some number of wells.

And if they fall under -- within the 15 percent and all of that. So I'm looking at the second portion where you said incentive to immediately plug under proposed rules.

Don't you believe that also with these rules, it will prompt the operator to really bring the well onto production above the threshold to avoid the $150,000 bond?

THE WITNESS: Right. So if the inactive well -- if there's a feasible plan, right, an implementable plan to bring that back on. Then I suppose, yes.

If you could bring that back on into production in sufficient quantities to lift it out of the marginal and inactive status, then yes. There's an incentive in that -- in that respect as well.

Although, given that wells tend to decline over time, it is more likely that the incentive here will be to simply plug some of these marginal and active wells. Regardless of their productive potential.

Because if it results in the tripping of this 15 percent threshold. If you have a large portfolio of wells -- here we're only talking about ten wells. But you can easily imagine if I've got 50, a hundred wells.

Having to pay $150,000 on each one of them, we're moving very far away from the theoretical ideal that says that large portfolios have on an average well -- per well basis, lower likelihoods of orphaning. And so, yeah. Does that answer your question?

COMMISSIONER WILLIAM AMPOMAH: Yeah. But so the applicant and OCD, they are being generous in terms of this rule is not going to be implemented on day one. They are giving operators up to probably mid-2028, you know, for operators to really assess their portfolio.

And after that date, then if you're still in the marginal status, then you have to put the bond. Don't you believe that the time is enough for (inaudible) to really assess the economics, and then their portfolio, to make decisive decisions about how to deal with their wells?

THE WITNESS: I think given the amount of time, I'm not sure that there would be enough time to even plug all of these wells. That would be my concern as well.

I think time will go by and commodity prices will move somewhere, and maybe that means that some -- some marginally productive assets, I want to go and recomplete a well or something, because commodity prices that are a higher price environment, right?

So that might affect how I look at turning inactive wells into producers again. But in terms of taking a sort of just general stance on -- these marginal wells are a problem under the proposed rule.

I have a strong incentive as an operator to just plug them as soon as I can. I think there is a physical constraint perhaps, on the amount of plugging services available in the state. How much concrete is this going to take, right?

This is going to take time. It's going

to take -- from a regulatory perspective, every single one of these plugged wells requires an inspection.

So this will be potentially administratively burdensome, if we're talking about plugging thousands of wells within the next couple of years in response to this rule. That would be a concern.

COMMISSIONER WILLIAM AMPOMAH: So if May 2028 is a concern, what time would you believe it works pretty well?

THE WITNESS: What time do I think is appropriate to give people enough time? I really don't have the information necessary.

I mean I think we could get some indication from the number of wells that OCD is able to plug in a given year. And then use that as our rate of plugging, and compare that to the number of marginal wells out there right now that we believe would need to be plugged.

Although, I'm not sure that -- just like the OCD's cost data may not reflect typical costs in industry. The rates at which the OCD plugs wells may not be indicative, because it's my understanding by the time that a well gets to the OCD to plug, it's in bad shape.

And I have heard testimony at this hearing; I think it was called the buckskin well. And it was extremely expensive and dangerous work.

So I think given that the OCD is having to contend with some of these especially problematic wells, their rates of plugging may not reflect the rates we would see in industry.

But I think we would just need to collect the data in order to determine how much time it would take.

COMMISSIONER WILLIAM AMPOMAH: You made a good point here where you said when the well gets to OCD to plug, the well is in a bad shape. And is that not the analysis that OCD used to come up with the $150,000? Saying this is how much a well that I'll be responsible for will cost.

THE WITNESS: That is my understanding. But the disconnect is that that cost is then being used as the barometer for determining the financial assurance on operators.

Many of those wells are going to be plugged by industry at industry's costs.

COMMISSIONER WILLIAM AMPOMAH: So then IPANM and (Inaudible) needs to come up with alternatives, right?

THE WITNESS: I'm not in a position to suggest any alternatives. I think -- and I hate to generalize again.

But I think we're all sort of interested in addressing the orphaned well problem to the extent that it exists. And there are lots of different alternatives potentially, to addressing it.

COMMISSIONER WILLIAM AMPOMAH: Okay. Let's go to slide number 10. So you base your analysis on the 15 percent. Mr. Tremaine asked you about if we go to 30 percent, the threshold for marginal wells.

And even I will add that there has been a lot of discussion about even putting some exceptions to these marginal wells that will fall under the bonding -- the individual well bonding.

Do you believe that with these discussions, and even this threshold, it relieves more prudent operators from really facing the consequences of the full 150 per well?

THE WITNESS: So I understand your question. You're asking me if an alternative threshold, maybe not 15 percent, maybe a different number?

COMMISSIONER WILLIAM AMPOMAH: Yeah. (Inaudible).

THE WITNESS: I think just -- I think

mathematically, you would -- you would catch -- there would be fewer instances of portfolios being caught up in this 15 percent threshold, or the enhanced FA cost.

My real concern though, is the fact that there's any threshold at all. And I -- let's think about if we have a portfolio of say, maybe we've got a hundred wells. Okay.

And we have -- you know, 14 of them are marginal. And next month, one of the other wells becomes marginal. So now I'm at 15 percent.

It could be that the other 85 wells in my portfolio, all of which have very low likelihoods of orphaning. Now all of a sudden, those wells are going to be burdened with an exceptionally high level of financial assurance.

Certainly higher than what is economically justified. And so on that basis alone, I think that this is an inefficient way to go about bonding. I think it's an inefficient way of setting the bonding amount.

I think an individualized well by well bond amount makes more sense if you're trying to address the specific concerns with these very low producing wells.

Again, if we think that the low producing wells have a higher likelihood of being orphaned, then a policy prescription that addresses those specific wells makes more sense to me than imposing a large financial assurance cost on a large portfolio of wells.

Which might include many wells that are extremely highly productive. For which that bonding amount is economically unjustified.

That's really my problem with the 15 percent. It's just that there shouldn't be a percentage threshold at all.

COMMISSIONER WILLIAM AMPOMAH: Well if you say that (inaudible) it means you are disregarding the risk -- the potential risk to the state. Because these low producing wells are the ones that could be orphaned.

THE WITNESS: No. But again, the -- there is a single well bonding amount. So here, this is distinct from, you know, the proposed rule requiring bonding on marginal wells specifically, right?

So in my earlier example, you've got 15 marginal wells. Under the proposed rules, those would be bonded at that special qualification, right?

The real issue here is that this 15 percent threshold triggers an increase on the remaining bonds, which are not in marginal status.

And again, just thinking about the -- what the ideal bonding amount is here, when we think about the risk of the individual marginal well -- a marginal well in isolation, if we imagine it's off on an island all by itself. And the operator only operates that one well.

The likelihood of orphaning might be high. But now transfer that well into a portfolio of 99 other high producing wells. All of a sudden, the operator of that 100 well portfolio, has a very strong economic incentive to plug that single marginal well. Because he doesn't want it to imperil the profitability on the other 99 wells.

Assuming that we can put these marginal wells into portfolios of other wells that are not judgment proof, that can only reduce the likelihood of orphaning. Not increase it.

To the extent that this 15 percent threshold actually provides an disincentive to incorporate marginal wells into larger portfolios. This is going to, I think, accomplish the exact opposite of the intent, which is to reduce the risk to the state.

COMMISSIONER WILLIAM AMPOMAH: Thank you for that. Let's go to slide number 30. So you talked about -- yeah. Slide number 30, yeah.

So your first point, you're saying incentives to produce during poor market conditions. Now don't you believe that there could be an exception that could be added to, let's say, the marginal wells that needs to be bonded to $150,000?

There has been some discussions about some instances where there could be some exception. Do you believe that poor market conditions can also be part of that?

THE WITNESS: I think it could.

COMMISSIONER WILLIAM AMPOMAH: Number three, you said bad actors may simply report an error or falsified days or volumes. You know, this is something that is very important, but we've not really discussed about this, you know, extensively at the hearing.

Even though I'm asking you the question, but I really want OCD to respond to this. You know, what mechanism they are putting in place to make sure that the rule is more or less set in place, and followed by operators.

So I want to ask you, how do we address this problem though?

THE WITNESS: It would -- it would require intense market -- intense monitoring and vetting of the information that you're relying on.

So this is sort of the -- in terms of the implementation, how feasible is it to implement this policy? If you require an absolutely accurate number of production days, clearly the data shows that there's some wiggle room there in how it's reported. That's a concern. Right.

So what I would expect is that after you impose -- if the proposed rule is imposed, you should see more bunching right around that 15 percent, right -- what's going to trigger that 15 percent threshold.

So the only way to really address it, if you really wanted to implement the rules as written, where you're going to define a marginal well as a function of production days. Then you need an accurate count of production days.

And you know, from a practical standpoint that may be difficult. And if it requires compliance on behalf of the regulated, I think we're going to run up against the issue of bad actors again.

And in fact, to the extent that good actors do the right thing and supply honest data, those are the ones that are going to get disproportionately caught out.

COMMISSIONER WILLIAM AMPOMAH: Thank you, Dr. Ascott for your testimony. I have no further

questions.
HEARING OFFICER: Thank you.
Commissioner Bloom, do you have questions?
COMMISSIONER GREG BLOOM: Thank you, Madam Hearing Officer. Dr. Ascott, no questions. Thank you for your time.
HEARING OFFICER: Chair Chang.
CHAIR ALBERT CHANG: Can we go back to those slides? Let's start with slide 5. Actually, let's start with 10 and then work our way back if that's okay. Thank you.
If I heard you correctly, I think you said something along the lines -- and forgive me if I'm misquoting here. I don't have a transcript right in front of me.
But on this -- on slide 10, I thought during the discussion with the Commissioner Ampomah, you said something along the lines that an individual well by well financial assurance would be more efficient. Is that -- did I capture that correctly?
THE WITNESS: That's correct. But efficient in a theoretical sense. So you know, economic theory says that the ideal bonding amount is related to, in part, to the expected costs of plugging the well.
CHAIR ALBERT CHANG: Okay. And then

let's go back to slide 5, where we talked about averages or you had this discussion with Commissioner Ampomah about averages.

I understand median costs by definition is greater than half the population. But also then, less than half the population, right? Kind of in the definition of the word median.

So between those two positions then, I'm trying to figure out what your policy prescription would be. Because if you're asking for us to do well by well costs instead of averages as what is being proposed here.

I mean there's certainly regulatory frameworks out there that require project by project costs analysis and bonding, before permits are issued, right? New Mexico's Mining Act of 1993, SMCRA 1997 -- 1977, excuse me.

I mean is it IPANM's position that OCD should require well by well plugging costs analysis and bonding at the time before we issue each APD?

THE WITNESS: I wouldn't speak for them. And what I'm saying here is that, you know, theoretically, what you'd want is that information. But from a practical standpoint, it's impossible to get that information.

So the point is that vertical depth is something that's easily verifiable, right? That's something that the current financial assurance requirements take into account.

So for a single bonded well, the amount of the bond is tied to the depth of the well. And the depth of the well correlates in a statistically significant way, with the eventual costs of plugging that well.

And so my point is that the -- if we're trying to tailor the financial assurance in an economically efficient way, the current rules that are based on vertical depth, are closer to that theoretical ideal. Even though the theoretical ideal isn't practically implementable.

CHAIR ALBERT CHANG: Well certainly has been forced -- or has been enforced and made practical in other industries. But going -- maybe -- would you agree with me if I phrased it differently to say that economically, there's a transaction cost to that kind of analysis? That would also weigh down the efficiency.

THE WITNESS: That is exactly the way to characterize it. I would agree with that.

CHAIR ALBERT CHANG: Okay. And you've mentioned depth then as a proxy for how to better --

than to a average here, right? Depth is one proxy. I think I heard you also say that depth is a noisy proxy, but it sounds like you're saying it's better than no proxy. Fair enough.

We've had testimony to the contrary about how effective depth really is as a proxy. Other than -- and so putting that dispute aside. Other than depth, are there any other proxies that you have looked at or recommend, that may be -- I won't ask you to say whether it's better or worse.

But are there other proxies that you think would be reasonable for this commission to consider as part of this rulemaking?

THE WITNESS: So statistically speaking, there are other proxies like well age. But -- excuse me. The age of the well has been shown to be statistically significant, as well as whether it's an oil or gas well. That's a statistically significant variable as well.

The type of hydrocarbon maybe is more easily verifiable at the state level, similar to true vertical depth, but the age of the well is tricky though, right? Because you'd have to have a measure of, you know, how do you define the age of the well? Is it when it was first drilled, or subsequent recompletions?

And so there may be some additional work that would have to be done there. And I really haven't given it much thought. I'd have to really think about it.

But I can tell you there are other variables that are statistically correlated with plugging costs. And I would encourage you to read the Ramey et al paper. It's a good paper.

It's got one regression table with two specifications. And you can read it in 30 minutes.

CHAIR ALBERT CHANG: Sure, sure. Thank you. Let's -- I appreciate that. So age and depth. And we'll definitely take a look at all the other submissions and part of the record.

We're all, I think, doing our best up here to try to find the both -- the best -- understanding that all proxies have their limitations. But trying to find the best way to get to something that is not administratively as much of a -- or trying to find a medicine that's not worse than the cure. So -- or worse than disease. So appreciate it. Thank you.

THE WITNESS: Thank you.

HEARING OFFICER: Thank you. Any reason not to excuse Dr. Arscott? Thank you very much for your testimony, Dr. Arscott.

THE WITNESS: Thank you.

HEARING OFFICER: Break for lunch and come -- wait. Are we coming back at 1:00 or?

UNIDENTIFIED SPEAKER: We have -- what we have discussed, Madam Hearing Officer, Mr. Harvard is scheduled to be back in the country sometime this afternoon, but that's -- still traveling.

And so I think the best plan is probably to reconvene tomorrow at 9:00 like we had discussed via the platform, and present Mr. Nabors and Mr. Harvard.

Actually, I think Mr. Harvard then Mr. Nabors is the order I've told people. And if that's still the hearing officer and commission's pleasure.

HEARING OFFICER: All right. Anyone who believes we should convene in the room, it will be, I believe, pretty short tomorrow morning because the witnesses are shorter witnesses. And the cross exam will be shorter as well.

UNIDENTIFIED SPEAKER: So they're both fact witnesses.

HEARING OFFICER: Yeah.

UNIDENTIFIED SPEAKER: And I think 15 or 20 minutes is what we set aside for their direct.

HEARING OFFICER: Yeah. All right. So we're agreed. Tomorrow morning on the platform. Thank you all very much.

UNIDENTIFIED SPEAKER: I'm sorry. Those are our final two witnesses?

HEARING OFFICER: Correct.

UNIDENTIFIED SPEAKER: Okay.

HEARING OFFICER: And our final public comment session.

UNIDENTIFIED SPEAKER: Maybe while we're all here, just take a few minutes. Maybe we want to discuss future timelines.

HEARING OFFICER: That's right. Thank you. Commissioner Bloom was wondering -- and the other commissioners, wondering about the post-hearing process.

What I described was kind of the post-hearing process in its fullness, which is it usually takes a couple of weeks to get the last of the transcripts.

And then the question is, how long would the parties like to submit their written closing arguments? And or, proposed kind of final proposal, based on the record of the rule changes that you would like to see or not see.

If there's time for me to do a short report, I do it. It doesn't -- never includes recommendations. It's really just a compilation of the final proposals, and or a short roadmap for their deliberations. That's all it ever is.

I will say one thing, Commissioner Bloom. I know the session starts around January 20th, yes? And Commissioner Bloom is gone on an extended trip beginning January 15th, is that correct?

COMMISSIONER GREG BLOOM: (Inaudible).

HEARING OFFICER: So the question is, can we fit these things in such that they can deliberate by January 15th?

MR. CLOUTIER: So Madam Hearing Officer, I would observe a couple of things. And I don't know how to fit them all together, but we do have two holidays coming up, which makes it difficult. And the commission has encouraged us to visit.

And you know, I think discussions are still going on within industry, but we've provisionally set up an initial meeting. The first -- December 5th, I believe, Ms. Fox.

And to meet and discuss, and perhaps industry may have some suggestions for applicants in the division. And so I guess part of it is how -- I doubt that we're going to solve our -- all our issues on December 5th.

I think it would be the beginning of a

discussion period at best. And so, I'm wondering whether -- not knowing how long Commissioner Bloom's trip is, maybe we ought to be shooting for the end of that for getting submissions. But I'd welcome everybody else's thoughts too.

HEARING OFFICER: So due to the Chair's commitments during the session, if it's not by January 15th, it would have to be after the session, which means the earliest would be late February.

Ms. Fox, how would you feel if I -- if I kind of punted this ball to you? Based on what you know about what meetings you're likely to have. And understanding that it would either have to be before January 15th, or after the session.

And again, based on the availability of the commissioners. And you shared, for example, a proposed schedule for us.

MS. FOX: So Madam Hearing Officer, what you're suggesting is to work with the parties --

HEARING OFFICER: Yeah.

MS. FOX: -- and suggest a schedule to the commission?

HEARING OFFICER: Yes.

MS. FOX: I think that makes sense.

HEARING OFFICER: Okay.

MS. FOX: Appreciate that.

HEARING OFFICER: All right. Because I just don't think we're going to be able to settle on dates here today. All right. Thank you. Is there anything --

CHAIR ALBERT CHANG: Speaking for myself as just one of the commissioners, I would be -- I would much prefer a timeline that concludes before January 15th, as opposed to one that drags on after. Just putting that out there. Thank you.

COMMISSIONER WILLIAM AMPOMAH: So Mr. Chair, you know, I will also propose that at least the parties have enough time to really think through this proposal, you know, before they bring it to us. To make our job easier. Other than that, it's going to be really tough.

HEARING OFFICER: Anything else before we adjourn here for the day?

CHAIR ALBERT CHANG: I have faith.

HEARING OFFICER: All right.

CHAIR ALBERT CHANG: I have faith in these guys to be very speedy yet thorough.

HEARING OFFICER: All right. We'll see you tomorrow morning on the platform at 9:00. Thank you.

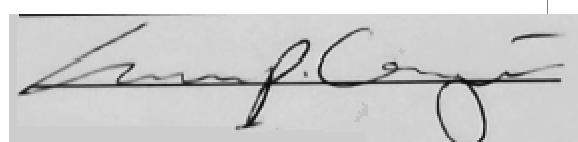
MS. FOX: Thank you.

MR. CLOUTIER: Appreciate your confidence.

(Whereupon, at 12:02, the proceeding was concluded.)

CERTIFICATE OF NOTARY PUBLIC

I, GERALD ARAGON, the officer before whom the foregoing proceedings were taken, do hereby certify that any witness(es) in the foregoing proceedings, prior to testifying, were duly sworn; that the proceedings were recorded by me and thereafter reduced to typewriting by a qualified transcriptionist; that said digital audio recording of said proceedings are a true and accurate record to the best of my knowledge, skills, and ability; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this was taken; and, further, that I am not a relative or employee of any counsel or attorney employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.



November 18, 2025

GERALD ARAGON
Notary Public in and for the
STATE OF NEW MEXICO

CERTIFICATE OF TRANSCRIBER

I, SONYA LEDANSKI HYDE, do hereby certify that this transcript was prepared from the digital audio recording of the foregoing proceeding, that said transcript is a true and accurate record of the proceedings to the best of my knowledge, skills, and ability; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this was taken; and, further, that I am not a relative or employee of any counsel or attorney employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

November 18, 2025

SONYA LEDANSKI HYDE