UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of: *
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HOUSE EXPLOSION IN FIRESTONE, *
COLORADO, APRIL 17, 2017 * Accident No.: DCA17FP005
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Interview of: PETER GINTAUTAS

Frederick-Firestone Fire Protection
District Business & Education
Center
Longmont, Colorado

Friday,
May 12, 2017

APPEARANCES:

RAVI CHHATRE, Investigator in Charge
National Transportation Safety Board

GBENGA AJIBOYA, General Engineer
Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration
(PHMSA)

MICHAEL LEONARD, Quality Assurance Professional
Colorado Oil & Gas Conservation Commission

MATTHEW LEPORE, Director
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DOUG PRUNK, Fire Investigator
Frederick-Firestone Fire Protection District

DAVID PUCCETTI, Fire Investigator
Frederick-Firestone Fire Protection District

DAVID McBRIDE, Vice President of Health, Safety & Environment
Anadarko Petroleum Corporation

MATTHEW McKENZIE, Attorney
National Transportation Safety Board

I N D E X

I N T E R V I E W

MR. CHHATRE: Good afternoon. Today is Friday, May 12, 2017. We are currently at Frederick-Firestone Fire Protection District's Business and Education Center located at 8426 Kosmerl Place, Longmont, Colorado. And we are meeting regarding the investigation of explosion of a house, located at 6312 Twilight Avenue, Firestone, Colorado that occurred on April 17, 2017.

My name is Ravi Chhatre. I am with the National Transportation Safety Board located in Washington, D.C. and I am Investigator in Charge of this accident. The NTSB investigation number for this accident is DCA17FP005.

I would like to start by notifying everyone present in this room that we are recording this interview and we may transcribe it at a later date. Transcripts will be provided directly to the interviewee for review and identifying any typographical errors. The transcripts may be posted in NTSB's public docket.

Also, I would like to inform Mr. Peter Gintautas that you are permitted to have one other person present with you during the interview. This is a person of your choice -- your supervisor, friend, family member or, if you choose, no one at all. Please state for the record your full name, spelling of your name, organization you work for and your title, business contact information such as mailing address, email address, telephone, and whom you have chosen to be present with you during your interview.

MR. GINTAUTAS: My name is Peter Gintautas. And it's spelled

P-E-T-E-R, G-I-N-T-A-U-T-A-S. I work from a home office in Firestone, Colorado. My phone number is the easiest one. It's [redacted]. My email is my [redacted]. I believe Matt is here, my second person. And that's fine.

MR. CHHATRE: Okay. Now I would like to go around and have each person introduce themselves. Please state your name, spelling of your name, your title, and organization that you represent, and your business contact information, starting from my left.

MR. AJIBOYE: My name is Gbenga Ajiboye, G-B-E-N-G-A, A-J-I-B-O-Y-E. I'm an engineer with Department of Transportation, PHMSA. My office address is in Lakewood. My cell phone number is [redacted]. And my email address is [redacted].

MR. PRUNK: Doug Prunk, Frederick-Firestone Fire Department Division Chief, dprunk, [redacted].

MR. LEONARD: Mike Leonard. Last name spelling L-E-O-N-A-R-D. Colorado Oil and Gas Conservation Commission, Quality Assurance Professional. Email address is [redacted]. Cell phone number is [redacted].

MR. LEPORE: Matt Lepore, Director of the Colorado Oil and Gas Conversation Commission. Contact, [redacted], Telephone [redacted].

MR. McBRIDE: David McBride, Anadarko Petroleum Corporation. It's David McBride, M-C-B-R-I-D-E. My contact information is [redacted]. Also [redacted]. I'm Vice President of Health Safety and Environment of Anadarko.

MR. CHHATRE: Thank you very much.

INTERVIEW OF PETER GINTAUTAS

BY MR. CHHATRE:

Q. Mr. Gintautas, for the record, just your education, background, formal, informal trainings and your work history related to this work.

A. Okay. I have a bachelor's degree in geology from the University of Minnesota. I have a master's of science and geology from the University of Calgary. And I have a PhD in geochemistry from the Colorado School of Mines in Golden. And I worked in the mining industry at some point. I worked in -- ran analytical chemistry labs in Florida and in Colorado and came to work for the state 10, a little more than 10 years ago as an environmental specialist with the Oil and Gas Conservation Commission.

Q. So with the commission what are the responsibilities, environmental (indiscernible)?

A. Well there are -- there are many. One of the first responsibilities we always prioritize is complaint response and things to do with people calling and raising issues with spills or releases or health and safety concerns. Other than that there are quite a few number of forms and other things that we deal with on

a daily or more often basis of relating to spills or cleanups of spills. Internally -- and reading documents that come with those. Internally I'm our internal subject matter expert on geochemistry which a lot of what we do with environmental stuff is the chemistry of the soils and water. That's what I -- my specialty as a researcher years ago is. And it's still what I informally do that with our staff.

I coordinate with the eastern staff, eastern Colorado staff in particular on water wells that have been impacted with thermogenic gases from -- mostly from leaky casing or cement jobs, that kind of thing. Not necessarily from a pipeline release but from the vertical portion of the well. That's something we have a number of in the northeast part of Colorado and we've kind of come to the last year or two to kind of refocus on trying to understand that and work, you know, work those out so we can find ways with the engineers to keep that from happening.

Q. So going back to April 17th incident, what was the environment in that incident? And just walk me through the end really.

A. Until April 20th I was not involved. I received a call from my supervisor on, I don't know, 9:35 or 9:45 or something asking me to go out and provide assistance to the -- the local fire department and sampling gas samples or in general and sampling things at the home. And that call had been for -- to Mike from -- to my supervisor. And I think that Chief Puccetti had asked Mike

for advice on that. And Mike had said he'd rather somebody else provide that advice and that happened to be me.

I live about a mile away from the site so it wasn't very long before I was over there. And the 20th we collected -- there were a lot of people there on the 20th. I could not name all of those people are even tell you who they all were. But there was a large delegation both from insurance companies, fire investigators, the fire department, people from our staff, police, and we collected a soil gas sample from the end of -- there was a trench that was already in existence from I think from the day before that had followed the pipeline up to near the oil. And there was maybe a foot or foot and a half of dirt that had not been excavated right near the foundation.

I -- we used a soil -- what's called a slide hammer. It's about 3 feet. You can make a 3-foot deep hole with it. It's quarter to half -- I guess maybe a half an inch wide. You can then stick a tube in and get some gas sampled. I measured, you know, gas there. There were hydrocarbons, combustible hydrocarbons in it, using my for gas meter and then hand collected it using a little hand pump into a -- a bag specifically designed for gas samples and labeled it, put it back in my vehicle. So I had custody of it. And over the course of the day we did that at three -- three total places. One in the window well of the neighbor's house, at 3610 as I -- I'm not sure what the neighbor's house number is. But the -- just to the west there was a

combustible gas at about the LEL level coming up through the French drain in the window well.

And then the -- Chief Puccetti had asked about collecting a sample out in the middle of the lawn of this neighbor's house. And we did that too. And I believe the -- the original measurement was somewhere around 50 percent by volume methane. That's certainly not what the gas sample showed. But that's -- I think there's some -- the flow into the -- into the holes is not maybe as fast as one would like. I think you're actually pulling in some air, diluting the samples a little bit in the way we did it.

So that's the first day I was there. On April 27th I was there again. There was some work going on to kind of try to find the sump (ph.) in the basement. And again I was asked by my supervisor to go out. And we had gotten word of that at some point fairly early in the morning. I don't remember what but he called me and asked me to go over and provide any assistance as requested from the fire department and collecting samples again. And we ended up collecting a sample of water -- samples of water from the sump after it was found which took half -- I don't know. Until 2:00, something like that, in the afternoon.

And, again, those samples -- the -- all the gas data has been provided to the fire department. The water sample data has also been provided to the fire department and in our world it's probably -- it's public information anyway. But it's -- I -- I've

provided it to Chief Puccetti by email as we got it.

Then the third time I was anywhere around the site was May 10th. So Tuesday this week. And our staff had been arranging to have soul gas survey done using that kind of probe and quite a bit had been done already, even starting the week before. But there were some other spots they wanted to get over near Oak Meadow Drive, Boulevard, whatever the proper name is for that street where we're getting very high gas readings in the soil at 2 or 3 feet of 100 percent by volume methane.

And I believe that's -- it's a different map, but I believe that's -- there's a map Stewart has on the back of this. Make sure I'm looking at the map right. That's over about here in this area along the -- the road coming in. So --

Q. Do you know the --

A. It's Oak Meadow Drive or Oak Meadow --

MR. LEPORE: Boulevard.

MR. GINTAUTAS: Oh Boulevard. Okay.

BY MR. CHHATRE:

Q. Which one?

A. Oak Meadow Boulevard.

Q. Okay.

A. So this -- the pipeline -- I don't know exactly, or I've not been involved in trying to dig that up. I know there was a trench dug there at some point in the earlier days because I saw the depression still. But we -- along two or three places, I think

three at least, along there we got ratings at 2 or 3 feet of 100 percent by methane and in that earlier part of the survey when I wasn't there. And we wanted to reproduce that and also do further define it out to this side. So some more points were added to our soil survey out across on the west side of Oak Boulevard there.

And there were also some monitoring holes being drilled with another one of our staff was there. And he was supervising that with the contractor using a little -- a geo probe which is a small drilling rake on a track mounted rig. There was also contractors for Anadarko who were doing something very similar with another geo probe rig. And I -- I have talked to them. I know who they are. We've worked -- they've worked for us too before.

I mostly was there to coordinate with the -- the contractor that was doing the soil gas survey for us. And as the last thing we went back to the third house in that row which is four, I think. But whatever the first numbers are, to check the backyard to see if there were any levels of methane in the -- in there which we got background levels. Because the -- the homeowner had asked us to. And we did that as a -- I believe those were communicated to her that same afternoon by my supervisor or my manager in Denver because I had called them and sent them an email with information as well.

That's, you know, other than internal discussions, that's been my part of the investigation. I'm not -- you know, I'm not -- I was not there when the pipes were exposed originally and those

kind of things.
Q. So I -- correct me if my dates are wrong. April 20th, April 27th, and May 10th.
A. And May 10th.
Q. Thank you much. Did you generate any map of fact that shows where this (indiscernible) and readings that are --
A. The contractor has -- I don't know that I have a final map of that yet. I -- it may be in Denver. I -- they were the ones taken the GPS -- I mean, there -- I was there in an oversight capacity trying to make sure we knew where they went and that they were getting to the spots that we wanted to and be able to communicate back to our staff in Denver more than I -- I was not really doing the measurements myself.
Q. So you did not take the readings?
A. Not the soil ones. We hired a contractor who we've used before for soil gas surveys and have confidence in. They were doing that. They had started doing that on April 27th I think. The original -- the original part, this was some additional sites because there had been -- we figured out that there were some other places that had very high methane readings at 2 or 3 feet.
Q. Can you add that in (indiscernible) list to get that document, readings?
A. It -- it -- yeah, I don't -- I'm not sure the contractor has finished the -- it will be finished. I'm just not -- I'm not sure that it's done --

Q. Yeah. Oh, no, no. I -- they -- I'm not asking for them tomorrow.
A. -- as of today. Yeah. No, I just --
Q. Whenever it's done please.
A. -- want to -- you know, it's a --
Q. Sure.
A. It's a process. I -- it's -- it's from LTE. And John would have it at some point. He's been the point of contact I think for that.

MR. LEPORE: Can I -- I want to make a clarifying question or comment.

MR. CHHATRE: Sure.

BY MR. LEPORE:

Q. Matt Lepore, COGCC. Ravi asked, Peter, if you, Peter, had taken the readings. And I want to make sure -- my understanding is that you -- you personally did take some readings on April 20th.
A. The 20th, yes.
Q. And 21st.
A. And probably on the 27th. I was not there on the 21st.
Q. Sorry, 20th and 27th.
A. Yeah. I did. I did.

BY MR. CHHATRE:

Q. I appreciate that.
A. I did, yes, I'm sorry. And I did.

Q. That's okay. We got it -- we got it straight now.
A. They were -- yes. I -- I -- the formal soil survey that we have contracted with I was not the -- the --
Q. Okay.
A. -- the measurer.
Q. Okay.
A. But, yes, I think many people took measurements on those first couple days and gas samples, too, but I don't have any clue where the data is.
Q. The (indiscernible) you'll need to for maintain or you need to (indiscernible)?
A. The -- the meter I have is a -- it's a so-called four-gas meter. It's what we typically have. It has a combustible gas channel, oxygen, carbon monoxide, and -- and hydrogen sulfide. So it's not -- it reads out. It's calibrated in terms of methane. But it would show -- you know, it tells you basically any -- any combustible gases which even -- and it separates H2S out because H2S is actually a combustible gas too. It's just -- it has a little filter that gets that out of the methane reading.
Q. So combustible gas, oxygen, H2S, and what?
A. Carbon monoxide.
Q. Carbon monoxide.
A. They are used more as personal protective, you know, devices -- I mean, they are -- they are reliable. I've had the same one for 10 years. It's been repaired and calibrated many times but it

-- yeah. They -- they work pretty well.
Q. Do you use that meter often?
A. Not as often up here. I worked in another part of the state for the -- for our agency. And there were a lot of water wells and coal beds there. And I -- I did use it routinely because it -- it -- they had methane maybe from -- from oil and gas industry, but just because they had wells in the coal, and the coal has methane in it. And oftentimes they didn't realize that they perhaps had a hazard at their water well, and it was always part of my -- if I went there to sample their water or something to test that.
Q. On April 20th and 27th, how did you calibrate your unit?
A. It had been -- factory calibrated. I used mine and used somebody -- I used another one of our -- our -- they take them into a company and his had calibrated just three -- I think earlier that week at ESS, which is in Commerce City. It's a -- it's safety supply place. And we get repairs done and the calibrations, which are kind of quarterly are done there.
Q. But the unit you had doesn't require calibration before you take the readings.
A. It's a bump check kind of thing. It's not a full -- I don't have a set up to do a full -- it could be calibrated. We do in the office in Denver have it. I -- I don't have a full set up to do a -- a real calibration. That's why I -- I -- I can tell you numbers but I would rather they --

Q. Sure.
A. -- they're estimates at best.
Q. So you had the (indiscernible) with the (indiscernible) taking the sample of how you do?
A. Yes, I -- I don't have a picture with me. But it's essentially a little rubber squeeze bottle with some tubes and it has a -- almost like a bicycle adapter going into the bag. And the bag has been evacuated at the factory. And you squeeze 10 squeezes and that gets 300 or 400 mils of gas in there. And they take it -- I took it to the lab the same day. And we got results in a day or two after that.
Q. Okay. So your samples would not tell us really the propane, ethane, all those --
A. Those --
Q. -- gases?
A. Those were analyzed for C1 to C6 carbon range.
Q. Okay.
A. So C1 to, you know, methane to hexane. Also, they were done for oxygen and argon and nitrogen, and maybe a couple other gases. Sometimes helium is done. I don't know that they did that that time. Sometimes H2S or hydrogen are done. I don't remember. I'd have to look at the data myself right now to see it. They did have a -- you know, they had ethane, considerable amounts of ethane and propane in those, in the, you know, the -- what we would call a wet gas. It's not a -- it wasn't 99 percent methane

or something. It had -- there --
Q. Do you remember what propane concentration was offhand?
A. I -- I do not. It was -- as a ratio I could tell you better than the exact number. The ratios were of, you know, the methane to ethane and propane were in the 5 or 6 range. Which is --
Q. Say that again, methane?
A. The methane to ethane and propane, so C1 to C2 plus C3, were in the range of 5 or I don't -- it's, you know, the -- it's not what I would have expected from the sales. You know, the gas being provided that -- through the utility company. So the amount of propane and the --
Q. Is it a value percent, high percent?
A. It is done by a 5 percent. Because of the way they're collected, there's so much nitrogen and things. I mean, you basically -- it's not necessarily -- you're looking more at the composition, the ratios of those than the exact amount. They did not end up -- the lab thinks, I think, the highest methane number might have been of those three samples that they might have been like 45 or 50,000 parts per million of the total of gas in it.

Of the hydrocarbons you get mole percents of the hydrocarbons. So, you know, they might have been 70 percent, 65 percent mole percent methane of the hydrocarbon gasses and 20 percent ethane, and 10 percent propane, something like in that --
Q. Okay. That again --
A. -- relative. It's on the report. And I -- I don't --

Q. Okay.
A. The main thing I -- out of that I saw is when they -- when they separate -- calculated the BTU content for the hydrocarbons alone if they had been the (indiscernible) think it was around 1,300 BTU per cubic foot which is not -- would not make it in a sales line for utilities. They were more like the 1,000 to 1,050 BTU, somewhere in that range. And I think the number in Colorado, I looked it up on the Energy Information Administration and the average last year was 1,059 BTU per cubic foot.

And it would have been 1,000 back 5 or 6 years ago. But because there's a lot of gas being made that has more ethane and propane in it now, the mix is being sold is slightly different.
Q. The geology background I guess, so doctor, tell me, are you familiar shale gas in this area, in this region?
A. The -- yeah, they're -- it's not -- I would not normally call it shale gas, but it is -- you know, it is what people call unconventional. It the two reservoir rocks are being drilled right now. One is a sandstone and one is a carbonate mineral. You know, the Niobrara (ph.), the producing formations are mostly limestone. The Codell is sandstone. And they're encased in black shales. I mean they're -- they're surrounded by black shales which are probably the source of it. But certainly the driver in this area is the liquid hydrocarbon. I mean, the driver for drilling and new exploration here is -- is not the gas like it is in the east coast or whatever in Marcellus into Pennsylvania or in

other parts of the world. It's --

Q. More liquid petroleum product.

A. That's the dollar part. I mean, there may be more gas but the dollar part is the part that people are concerned about and that's the liquids.

Q. Do you know if -- I guess you are calling that sandstone carbonate gas?

A. Well the -- the source of the gas really is the shale around it. That's why I say it's -- it kind of what people call the unconventional. But it's considered to be self-sourced, you know, in the rocks right around those. But the -- the Codell is largely a sandstone and the -- the chalk benches in the Niobrara that people drill horizontals in are carbonate thing, carbonate minerals, limestone, and you know, there certainly is other production. That vertical I don't -- I looked up at some point. I don't remember what it was. Maybe a j sand (ph.) and a Codell at one point. And we have -- it is still -- okay.

We certainly have a lot of gas samples from J-Sand and Codell wells. It's one of the -- in the water well investigations we oftentimes ask operators to sample certain gas wells and we use that in trying to figure out where the gas in a water well came from in an origin sense. There's differences in the isotopic ratios and things. The isotopic ratios for what I've seen from this are not -- they're very inconsistent from sample to sample. And I think it's because the -- the gas concentrations and the

actual samples we've gotten are pretty low. So it's not -- I'm not sure I've seen anything yet that I felt could be tied to a certain well or not.

We have -- somebody provided us with the sample collected on the 19th, I think, from the production well or somewhere in there. I don't know if Anadarko did it or somebody. We have a set of data that came from Anadarko. And I -- I know -- I don't really know who -- I've looked at it. There were some soil samples around the house. There's a production gas sample. And I thought -- I was told there had been a sample of the Black Hills Energy line and we don't -- I've never seen that data. I don't know -- I don't really know who took it or where it went to. I was told by Chief Puccetti that somebody did. And I thought it was LTE that took it.

MR. PRUNK: EOC takes that or the other --

MR. GINTAUTAS: I just don't know.

MR. PRUNK: They had to verify that. Sorry. Doug Prunk. They had to verify the meter when they pulled it. When they pulled a sample of --

MR. GINTAUTAS: Yeah, I -- I just don't -- yeah. I'm not --

MR. PRUNK: (Indiscernible) sign.

MR. GINTAUTAS: I have --

MR. CHHATRE: Do you still have that?

MR. GINTAUTAS: Yeah, maybe. And that would be the -- you know, kind of the -- that would help the investigation on our part

to just kind of either rule in or rule that out as being anywhere similar to -- I can tell generalities about the sales gas that comes in. But and you can look it up. And I think you'd go to Black Hills Energy and they probably have a -- an MSDS that says their gas they sell in the lines is 97 percent methane. This gas that we're seeing is not 97 percent methane. It's a lot less. You know, and the ratio to the other hydrocarbons. But I -- I -- it would still be better to have a real -- even if we did it today it's still -- I mean, you know, in the future it would still be a reasonable thing to do.

BY MR. CHHATRE:

Q. Now you -- the shale -- and I'm going to use the term shale gas for simplicity.

A. Sure.

Q. Is shale gas composition any different than the normal vertical well composition for example, or would it be pulled out in this area?

A. Not really because a lot of the verticals are in the same formations. A lot of the -- there are some different, some deeper wells in the verticals that the J-Sand is a deeper, older rock. It's been heated up more. It has a different isotopic composition. It's still the generally wet gas that the gasses in the Denver Basin are not dry gases. They're not just methane. The (indiscernible) methane gases in southeastern Colorado and southwestern Colorado are 99.9 percent methane. You don't see any

propane even in them. They're -- they're different kind of gas. And they're a different composition and isotopically.

But in general in the Basin here there are trends from north to south because the rocks have been heated up differently. And that results in different gas composition and isotopic composition. And that you can predict in a reasonable manner. We use that kind of tool in trying to figure out water well where gases came from.

Q. So if you have two gas compositions, one from a shale gas, and one from I will say for lack of any better word, normal vertical well, if you would, is there a difference? Can you tell which gas came from which gas?

A. Not if they're both in the Niobrara. And there are many verticals in the Niobrara and they've been there for less time.

Q. Which area?

A. The Niobrara wells, the Niobrara formation.

Q. Spell it for the record.

A. N-I-O-B-R-A-R-A.

Q. Okay.

A. And -- and that's a -- that's a -- the limestone formation. It's at about 6- -- I don't know, 7,500 feet here. Something like that. There are many verticals in it. They're mostly getting -- a lot of them are getting plugged and abandoned. Because it -- it's not as economically -- they've had a 20, 30 year lifetime. That might be the case with the Coors one. I don't -- I don't

know. I didn't look at -- I don't know enough about the economics of that. But a lot of the older verticals are getting plugged simply because you can make more gas out of a 2-mile horizontal than you can from 100 feet of vertical pipe enter -- you know, going through the same formation.

Q. So the gas composition would not tell you if it's a shale gas or --

A. Not that it's from a vertical or a horizontal in that formation. If it's from the J-Sand which is a deeper one and really only ever has had, well, mostly all verticals. There are some differences at least locally. But you almost need to go into the -- a few miles around it and look. You can't take a sample from up on the Wyoming border and compare it to a sample from here for the same formation because they've been through different thermal histories, different burial histories, and it changes the gas composition and the isotopic data as well.

The isotopic data is also a function of what the organics are in the shale. If you have a shale that was a land plants you tend to get heavy paraffin's and not much gas. You have marine shales that have algae and other things in them. You get a wet gas or a nice oil and that's what people want. Not the -- not the paraffin, the heavy paraffin's and because they just clog up the well and clog up the pipes with oil and they don't necessarily make even (indiscernible) gas.

Q. So in this area near the accident scene, and, like, you know,

I'm not a geologist, so you tell me. Do you know this geographic strata to your knowledge that is a same gas, if it is a shale or a vertical well or if it's a different -- I guess what I'm trying to find out is it -- if the gas composition will tell me where the gas came from.

A. To an individual well if we get a good enough sample of the gas in the soil, and it hasn't been degraded, I think some of the gas right by the house has been altered by the fire itself. The heat and --

Q. Because of heat.

A. The heat. And -- and I -- I haven't found that in the literature. I'm not a fire specialist. I -- I -- I don't see that in the geological literature. But it may well be out in the fire literature that the gas composition and the isotopic composition. They would normally when they get heated. Whether they all got combusted or just, you know, something didn't combusted. There could be changes there out in the soil near the house.

Q. So if I'm hearing you right and I'm going put it in simple -- simple English, that the gas analysis wouldn't really definitely tell me that it's coming from the shale or it's coming from the --

A. The --

Q. -- Anadarko vertical well, or a --

A. It's -- it could. I won't say that it will absolutely. It's -- it is possible to do what people call fingerprinting. It's not

as immutable as our fingerprints unfortunately. It's -- the composition even in the well changes over time perhaps. That's been studied.

Q. That goes into my next question.

A. Yeah.

Q. The composition of the well --

A. It can.

Q. -- it will be changed --

A. It can. As it's getting it from -- you know, initially it's getting it from 2 feet away from the well. Maybe at -- at 20 years gas has migrated from hundreds of feet away and through different -- you know, maybe the -- the some part different formation is more prominent in it, that's still there. So gas composition can change over time. The isotopic composition can change over time. Maybe not -- and there's actually been a couple studies in Colorado that even it changed on a -- somewhat on a daily basis up in the -- the western Colorado from a water well impact that received a lot of study both from operators and from us. And a high frequency sampling was done on some of the wells that were suspected. And there were significant differences from day to day in the --

Q. In the same -- same well?

A. Yeah. Yeah. They're in the same formation. They're -- they're short distances apart because they're very tight formations out there. And they're only a few hundred feet apart

some of the wells, and they're different gases. And I've seen that in other places too. It's -- you know, it's the best tool we have. But it isn't always going answer your question.

Q. So variance is too much. Is that what you're saying? Is that -- so for layman's terms the variance of the composition even in the same well from time to time --

A. It could -- it could vary both in time to time. It's something that there has probably not been enough study done out of it because it -- it, you know, it costs a fair amount of money to do analysis. It means we have to have access day after day and stuff. But it -- it -- there is some variance in it. The gas composition can change some. But, you know, there's usually distinct differences between what's produced here and what's being sold at a house. Because they're stripping out all the heavier stuff because they can sell that for more money, the propane, or ethane, or the -- the natural gas liquids.

They're stripping that out and selling it for much more than they can sell the methane fore. And it's worth it. There's gas plants all over this area where that's done both by operators or third parties. But they have gas plants. Everybody else has gas plants. So there -- there are, you know, differences between what's sold in the utility system because the -- the appliances are set up to run off almost pure methane, or you put a little switch -- a little tool in if you're going buy -- I mean I had a house that had propane as the only source. You had to have a

different water heater. It's not a different water heater. It's just a different little burner that gets a different mix of oxygen so it will burn right.

And that's what plumbers do. They just change that in the water heater, the little device and say that it's set up for propane because it will not run on methane. It would probably explode.

Q. You mean if you are using the propane tank?

A. Yeah, but if you're using an appliance that's set up to run on methane, you can't run propane into it. It's too rich a fuel.

Q. Okay.

A. And the opposite is true, if you have an appliance that's been set up to run on methane.

Q. So propane -- propane setting would not allow methane to work.

A. Right.

Q. Now, let me change the topic a little bit. You said you live nearby where the explosion occurred?

A. I live about a mile away.

Q. So did you come that night?

A. I did not. I did not know what the -- I had -- I saw it on the TV news but I had no idea what the --

Q. Did you hear anything that night?

A. I did not. I heard the -- the -- I'm sorry I did. I heard the helicopter. I heard the Flight for Life helicopter and saw it

out my -- the window of my office. That's kind of why I went and looked at the TV. And then I saw whatever the -- the aerial images on three or four different TV stations that I recognized where it was reasonably close. I didn't -- I -- you know, I know other people went who looked at things the next day. I -- I didn't have a real reason to go in that sense. And that's when I get asked was I think to the 20th. So that's when I went.

MR. CHHATRE: That's all I have.

MR. AJIBOYE: Yes. I have a couple of questions. So you --

MR. CHHATRE: Identify.

BY MR. AJIBOYE:

Q. This is Gbenga from PHMSA. So you're talking about in a vertical well in this specify formation, the gas sample could be the same even if the well is horizontal in the same formation. I think that's what I --

A. Yes.

Q. -- was trying to get to. However, over time based on migration of gas from a neighboring area because this gas is producing, that isotope would change.

A. It -- it can. Let's put it that way.

Q. Okay. And that's -- okay.

A. It doesn't, sorry, have to. But it could.

Q. Yeah, because it's pulling.

A. But we have seen evidence that it can.

Q. It's pulling.

A. Because it may be from a third of a -- you know, whatever the frack distance actually -- if it -- if it propagated out 1,000 feet it takes a while for that to come in and obviously the closer stuff gets to the well first.
Q. And that could be why you have different signature over time.
A. Yes, yes, yeah. And the rocks are different, too. I mean, the rocks are not homogeneous. Let's put it that way.
Q. You said something. You said a propane setting in a water heater would not --
A. Yeah, it's the burner head.
Q. Yeah. The burner head would not properly combust in the tank if it's set for propane.
A. It probably would not have the right mix of oxygen and fuel as I understand it from a plumber. And I'm not a plumber.
MR. LEONARD: If I may. It's Mike Leonard.
MR. GINTAUTAS: Yeah.
MR. LEONARD: From the Oil and Gas Commission. From my knowledge of plumbing, there's orifice that regulates --
MR. GINTAUTAS: Yeah.
MR. LEONARD: -- how much gas is let through.
MR. GINTAUTAS: Yeah.
MR. LEONARD: If you have a propane orifice and you put it -- correct me if I'm wrong. If you have a propane orifice and you try to put methane through it you're going to have a really big fire.

MR. GINTAUTAS: Yeah.

MR. LEONARD: Because the propane orifice is bigger.

MR. GINTAUTAS: It's bigger.

MR. CHHATRE: But it's not like --

MR. PRUNK: It's reversed.

MR. LEONARD: Reversed.

MR. LEPORE: Natural gas is larger because it only runs it for water calm (ph.) and propane it's usually about 7 psi. So it's a higher pressure, small -- smaller orifice.

MR. GINTAUTAS: Smaller orifice. Okay.

MR. LEONARD: They will burn.

MR. GINTAUTAS: They will burn but they -- they don't have the right mix of oxygen. So they're not -- they're not effective. They're not efficient. So if you do this you want to switch. It's --

BY MR. AJIBOYE:

Q. So we can conclude that say if we have a water heater that is set up for methane, say, for example, propane is present, there's a possibility that (indiscernible) --

A. Sure.

Q. -- still burn. However, it's not its natural environment.

MR. LEONARD: If the propane is coming through the supply vent.

BY MR. AJIBOYE:

Q. So it will still burn that --

A. Yeah.

MR. LEONARD: It's got to go through supply line because it has to go through the orifice.

MR. GINTAUTAS: The orifice.

BY MR. AJIBOYE:

Q. What if it doesn't go through the supply line? Say some kind of foreign gas, you know, I ran that water heater. So what kind of thing can possibly happen?

A. Well I -- that's not my field. I -- I don't --

MR. LEONARD: So you're saying if you have stray gas migrating around the water heater of any kind?

MR. AJIBOYE: And would you exactly -- which -- say for --

MR. LEONARD: Then you'd have a fire.

MR. AJIBOYE: Okay. Now --

MR. LEONARD: Or an explosion.

BY MR. AJIBOYE:

Q. So to the last question I will ask is say -- let's see. Is it possible for the propane to lose an hydrogen atom in the (indiscernible) if it's in its natural form in this orifice? Is it possible to self-refine itself to lose some --

A. Not -- it does not really happen except under very high temperatures.

Q. So the catalyst would be heat, right?

A. Heat is the catalyst basically that would -- that makes the carbon -- the longer chain hydrocarbons break down. You can --

you can end up with almost pure methane in the crown simply because you -- the -- the source rock was heated, or the gas or oil was heated very much and it broke -- it broke down the longer hydrocarbons into shorter ones. And it can end up with methane. That's true in the -- in Pennsylvania. There's evidence of that.

Q. So which means it's a -- propane must have to heat the boiling point and higher before it can break?

A. No it's -- maybe not the boiling but yeah.

Q. But I mean somewhere. I mean the temperature.

A. Yes.

Q. So do you have an idea of what kind of temperature that can, you know, initiate that kind of reaction?

A. I'd have to go back and look that up. It's been a long time since I dealt with that in classes 20 years ago. So I'm not -- I --

Q. But we know -- we know that the boiling point temperature of methane, propane is --

A. Yeah. It's --

Q. -- very, very low.

A. Yeah.

Q. Literally very low.

A. In the ground it's not totally a function of temperature because there's a time. And -- and if you have a source rock that's full of organic material if you heat it to 100 degrees but you heat it to 100 for a million years you make oil out of it

maybe. If you heat it to 100 degrees for a year, you don't get oil.

Q. Okay.

A. There's a time and temperature thing in the ground because the reactions aren't instantaneous. There's a kinetics to it. They aren't going to go immediately. There's -- and there may be catalysts. People have suggested the shale itself, the -- the mineral grains in there act as a catalyst for some of these reactions. That's kind of off the subject. But -- but there can be catalysts in the ground that further that or slow it. There can be things that hinder it too.

Q. So in the case of a well, having a gas (indiscernible) how possible is it for that gas content to not be single -- of single signature like of different mixture?

A. Well it depends on the time it's there. If it's in water or something there may be bacteria that are breaking down. That's not uncommon in soil. There's a lot of bacteria that break down methane and -- and other hydrocarbons as long as there's oxygen present. So there -- there can be significant changes because of biodegradation. There are not as many other -- I mean it's not been documented that there are other significant changes, you know, beyond that. Let's put it that way.

Q. So if the gas actually did break from its natural state to a different one. Is there a kind of instrument that can tell the origin? Is that something that's --

A. I'm not sure of what you're really asking me.
Q. So say we have a propane now that went to methane for example. So when we have a sample of that methane, right, can we -- is there some kind of instrument that can tell from what sort of propane that methane came from? I'm just --
A. Not -- not in a direct sense, no.
Q. Okay. Okay.
A. No.
Q. Okay. I'm just trying to ask my question.
MR. LEONARD: Propane and methane --
MR. PRUNK: Doug Prunk with the fire department.
BY MR. PRUNK:
Q. Peter, you're from this area. What's -- what's this region called?
A. Firestone.
Q. And what -- what is this valley called?
A. Carbon Valley.
Q. And why -- what is the history of that?
A. There was a lot of coal mining here in the older, you know, 50, 100 years ago I believe. I'm not as familiar with the history here. But I know it. I've been up here for a couple years. But I know we have -- we have on our maps where there were coal mines from the best -- you know, the records we can get it. I -- I've seen before I bought a house. I did kind of look at our maps. I -- I know they're here. I don't believe I'm over one but that's,

you know, there -- there is methane and coal as we discussed earlier.

Usually you can tell that from isotopic gas composition. It usually is really just methane, not -- no -- none of the heavier stuff because it -- it's methane that's been often times in these shallow ones it's been produced by bacteria. There are also bacteria that make methane called methanogens. There's bacteria we talked about that break it down. They're called methanotropes because they eat methane. So there -- there is some things here. Yeah.

Q. So that -- I mean that's going. So those formations are obviously much higher than where we're pulling the wells in this region?

A. Yes.

Q. So would those -- between those formations and the vertical or horizontal wells, would they have a different signature?

A. They -- they do because we see a lot of that methane in water wells that are in -- go drill through those coal seams. And it does have quite a different -- both gas composition and isotopic signature. And I've not seen any of the samples that I've stated from so far, which is 6 or 7, or no, maybe close to 10 now total between ones we've taken and others that were given to us. That they -- they all are wetter gases with no methane. I don't -- I don't know of any reason to even remotely think it's from coal, from a shallow coal. And though shallow coals are really only at

400, 500 feet here, maybe 600 feet.

And there are -- there are water wells that encounter them. Maybe not in that subdivision. But there were before the subdivision was there probably, or in the area.

Q. Okay. So you stated that we worked in that sump pit. Do you remember our level -- any levels that we found in those?

A. The sump pit which was about 3 feet deep below the concrete of the cement -- the basement floor had two different French drain pipes coming in. So corrugated plastic one from the west and one that appeared to be kind of from the south of the house or the area. I don't -- we don't -- I did not know and I still don't know where those actually go. One of those by the LTE -- one of the contractors that was there whose meter was calibrated on site that day, and I watched him do it, he had it only sent to LEL. He got 100 percent LEL. And it wasn't -- he didn't have it in auto ranging mode. So we don't know. He did take a sample. I've not seen that data I don't think.

Q. Yeah, I think Chief Puccetti --

A. He may have -- yeah I just -- I didn't --

Q. It doesn't mean anything to us.

A. Yeah.

Q. It's a bunch of numbers.

A. Yeah.

Q. But we got it.

A. Yeah.

Q. For now if you have --
A. I -- the -- the -- I took the water samples out of the sump and the LTE contractor who was there I think at Anadarko's request collected the gas sample for the fire department and had it analyzed. I think Anadarko had it analyzed.
Q. And do you remember what day that was?
A. That's the 27th.
Q. Yeah.
A. April 27th.
MR. LEPORE: Sorry may I?
MR. PRUNK: Sure.
BY MR. LEPORE:
Q. Have you seen the results of the samples taken from the front strains? It's Matt Lepore.
A. There were French drain samples taken on the 19th when I wasn't there. I was -- that's from the house that burned. I have seen that. That was given to us I think by Anadarko or the fire -- I don't -- I think Anadarko paid for it to be done. I don't actually know who provided it to us. It was shown to me very shortly after we got it, probably the 21st or something like that. They were on extreme rush with the lab. All of us had taken him to the same lab essentially and they were overwhelmed but they did a very good job.
I've seen that one. It's, you know, different than -- I took a sample from the French drain from the house next door which had

damage to it but did not really burn too much. We took a soil gas sample from there. There's some other soil gas samples that -- from the 19th that I -- I don't know all exactly where they were because they were just described and didn't have GPS coordinates provided I don't think. We will get that I'm sure. I'm sure that LTE did it. I just don't -- I don't have that with me. They're just described as, you know, from here or there.

Another was the 20th. They did an 8-foot hole at the end of the trench with a hand auger. Right at the same place that I did the 3 foot hole earlier in the day. They did a hand auger to 8 foot. And then sealed it up and got a gas sample. I don't know if I -- I did -- I think I have seen that actually. We do have that. And, again, it's the same. It's a wetter gas. It's not just methane or a higher percent. It's not 95 or 99 percent methane. It's -- it's a wet gas with, you know, relatively the ratios of methane to ethane or propane or in the same type that we see in production gases from this area.

Q. So being that we did the sump pump testing on the 27th, a week or a half or so after the event, were -- were you surprised that we found readings still? Or should -- in your experience would there -- should it have dissipated by that time, or why do you believe that --

A. I believe the foundation -- the cement parts, the patio part that's still there, and the foundation, the basement floor are holding -- are a trap essentially.

Q. Okay.
A. I -- I'm not -- the one I think I might have told you -- I told Chief Puccetti. Anyway, there was a house that blew up because they built it on top of a well in part of southern Colorado when I was working for the state down there. It was a plugged and abandoned well. It was leaking gas. And they did not know it was there. And it was under their crawlspace. We coordinated that excavation and everything trying to find -- we thought the well was there but we couldn't really prove it until we dug it all up.

And I will tell you that upon breaking all the concrete apart and getting the cement floor out of the garage and everything the gas went away in about a day in the soil. And it's probably similar soils to here. And they're sandy. They weren't, you know, fill. But I am a little bit surprised at the -- the time that it's still there. And I haven't been back to the house to -- to really see what it is now. But the more time obviously and the more pathways out of the ground, you know, I -- I think on the -- when they -- when the trench was starting to be cleaned out on the 20th, because it had -- it had collapsed in on itself right near the house, I was west of there by 30 or 40 feet and the wind was quite strong. And my gas meter started getting four and 5 percent LEL at 30, 40 feet. And it's really because the soil was dug up and it let out another little surge of gas.

I am surprised a little bit in the timeframe. But I think

also until the house is either the cement floor is dug up or something there's going be some gas. It has made me worry that there's another source. I mean, that's -- if it stays for a long, long period of time and inevitable conclusion is that you haven't shot off the source, or that is one conclusion one could come to. And that worries me greatly if that doesn't go down. That's why we set up some other monitoring stations to the -- further to the west where we can go back and monitor day after day by putting a pipe in the ground.

Q. Instead of snapshot testing we'll be doing long term --

A. Yes, yeah, yeah.

Q. Okay. That's all I have. Thank you.

A. Yeah.

BY MR. LEONARD:

Q. Mike Leonard, COGCC. So the composition of the J-Sand gas and the Codell gas in this area is fairly well known. We have fairly good signature.

A. Or we can go get samples too.

Q. Okay.

A. If we need more. But I -- I -- I don't think we've had a lot of water -- the driver really has been the water well investigations. And there's not a lot of water wells there because it's city water now. So we probably haven't --

Q. Well I'm talking about --

A. -- the coverage.

Q. -- the J-Sand and the Codell.
A. In general. In general we do have quite an assortment of -- yes.
Q. So if we -- if you had a sample of the backyard of that -- of the affected home or of the home to the west --
A. Yeah.
Q. -- you could compare it to gas from a well.
A. I -- I think these have been -- they're --
Q. It's just yes or no.
A. Yes. Yes.
Q. Could you compare that with the utility gas, to a similar gas?
A. Yes.
Q. Okay. Okay. You said 100 percent LEL in the sample in the French drain. Can you tell me which French drain where and when that was taken?
A. The one I was just talking about is in the sump.
Q. So --
A. The plastic pipe -- there's two plastic pipes leading to the sump. I don't know -- we don't know exactly the track of them.
Q. Yeah, I understand. But do --
A. Understand the basement.
Q. Would not take samples --
A. I took a sample from the French drain in the neighbor's house.

Q. Okay. So it wasn't from the affected house?
A. There was one collected on the 19th by LTE that we have data from.
Q. And then you had a sample from the --
A. I have a sample from the -- and yeah, yeah.
Q. Sorry, for clarification.
A. Yes.
Q. LTE took a sample from which house?
A. The northwest -- the window well. The French drains come up in the window well with a plastic pipe so that water that goes into the window well will not go in the basement and go down, will hopefully go down the French drain. Maybe to the sump or maybe to a dispersal line. There's a northwest corner of the house that burned. There is a window well with the sump in it. And LTE took that on the 19th. The neighbor's house I took on the 20th. It is the southwest corner of the neighbor's house.

I was told that it had had much higher gas concentrations the day before until they opened up the trench and then they went to near zero. The trench collapsed and there was then some gas the next morning in there which is simply because it had a better route to go out the other way.

Q. So do you know if those were actual bag samples or were those just readings?
A. Those were -- I took a bag sample in the neighbor's --
Q. Did LTE take a bag sample?

A. Yes. In the -- in the northwest sump of the house that burned on the 19th.

BY MR. LEPORE:

Q. Sorry you -- Matt Lepore. You described two French drains into the sump. One from the west, one from the south.

A. One would have no LEL.

Q. Which one?

A. The one from the west.

Q. And the one from the south --

A. From the south or appeared to -- you know, came into the sump from the south. Where it actually was hooked up I don't know. But that had 100 -- by hand it had 100 percent LEL with the calibrated meter from LTE. They collected a sample. I have not -- that's the -- one of the data that I think Chief Puccetti has that we don't have.

Q. Thank you.

BY MR. PRUNK:

Q. And Doug Prunk. For clarification, they are -- it's the same house? It's not -- we're talking two different -- those two that come in are only that the --

A. In that one house.

Q. -- ring that goes around that one single house.

A. Yeah.

MR. LEPORE: Around 6312?

MR. GINTAUTAS: Yeah.

MR. LEPORE: The house that --

MR. GINTAUTAS: Yes.

MR. LEPORE: The exploded house.

MR. GINTAUTAS: Yes.

MR. LEPORE: And then there were samples taken --

MR. GINTAUTAS: Yeah.

MR. LEPORE: From the second one but they're not -- they're not sharing the French drain system?

MR. GINTAUTAS: The French drains, no.

MR. LEPORE: Right. And I thank you. I understood that to be the case.

MR. GINTAUTAS: Yes. The soil in the --

MR. LEPORE: Got a good drawing yesterday.

MR. GINTAUTAS: Yes. Chief Puccetti asked us to take a sample -- check the soil at 20 feet south of the house and 20 feet west of the fence line between 6312 and 6310. I did that. There's a sample. I came back and I -- I actually had stolen the meter from the DCP guy because it looked just like mine. And I walked -- Mike said, isn't that your meter, and I -- I take the sample and I went back because he called me. But -- so there's one from there. That -- by hand by the DCP meter which I don't know if it was calibrated or not, was 50 percent by volume in the backyard of the neighbor's house.

MR. LEONARD: This is Mike Leonard. Just for clarification, that -- that wasn't DCP. That was Black Hills.

MR. GINTAUTAS: Or Black Hills, I'm sorry. DES, I meant, Black Hills. Yep, yep.

MR. PRUNK: That's all I have.

MR. CHHATRE: Questions?

MR. McBRIDE: Yeah, this is David McBride. I'm a little confused on the directionality that you just did, north, west, east wells and everything. Do we have that drawing so you can just point to the --

MR. CHHATRE: I would guess one thing, maybe he can draw the sketch since he did the work.

MR. GINTAUTAS: Could I put it on there?

MR. CHHATRE: On a piece of paper. You can do it on the blackboard if you want and I guess (indiscernible) off it. Whatever works for you.

MR. LEPORE: We could have Doug draw it for you because he did really good --

MR. CHHATRE: Why don't you do that?

MR. GINTAUTAS: Are these erase-able so I'm not permanently marking.

MR. LEPORE: Yeah, don't pull a sharpie out of your pocket.

MR. CHHATRE: And put your name and today's date some place on that drawing. Okay? So we can make a copy of it.

MR. GINTAUTAS: Okay. There's whatever -- there's some vacant -- there's a property. There's a house here. It's burned. It's 6312. Is that right, Mike, 6312?

MR. LEONARD: Yes, that's the -- that the house --

MR. GINTAUTAS: Okay.

MR. LEONARD: Peter, today's the 12th.

MR. GINTAUTAS: 13th is on my mind for other -- okay.

MR. LEONARD: Yeah, because he's going to London.

MR. GINTAUTAS: I'm going to London tomorrow morning at about 6:00. So this is going be done by -- soon. Okay. So 6312, this is another house, 6310. And this is 6304. And we -- the other day on the 10th of May we did sampling in their backyard and got background readings of methane only in five spots in their backyard at the homeowner's request. Which was the right to do.

MR. CHHATRE: So backyard reading meaning none of the gas is going in that area.

MR. GINTAUTAS: In this direction right here. So five spots. One here. One here. One here. One here and one here in her backyard. It's a small yard.

MR. CHHATRE: Let me make a suggestion. Can you make those homes a little bigger?

MR. GINTAUTAS: I'm going to blow it up on the -- I'm just did this so you kind of have an idea where we're -- somewhere I don't know the distance, but Oak Boulevard is over here and the -- the real pipeline trace went here for the current pipeline, and then there's the other pipeline trace that crossed the road 100 feet or more to the south of the -- the -- the other one. There's readings over here that are 100 percent by volume right around the

area where the -- the pipe has been traced by the utility locates. Okay, 6312, I don't remember the exact shape. There's a garage pad here. The house is something like this. The sump was here in this story, or we looked here first because I thought that was going be in that part of the house. It wasn't.

We ended up trying to decide which corner to go to and we'd seen a pipe here that looked like a plastic pipe. It was under all the debris. And it -- we -- he chose to go over here because we thought the pump -- the pipe out from the sump pump to get out of the house that was under all the flooring and subflooring that had fallen into the basement.

MR. CHHATRE: Can you put the -- can you put the --

MR. GINTAUTAS: This was here under quite a bit of rubble.

MR. CHHATRE: Can you put some -- either put S in there or --

MR. GINTAUTAS: Okay. This is S, E, N, W. I'll leave in off there.

MR. CHHATRE: Speak louder.

MR. GINTAUTAS: Okay. I will try. The window well we're talking about is, I think, about right here. The one in the other house is right there on the corner, that I sampled. This one had been sampled on the 19th. I sampled that on the 20th. We sampled a soil gas sample there on the 20th.

MR. LEPORE: Wait, wait. Hold on.

MR. CHHATRE: I see the window there on the right --

MR. GINTAUTAS: 6310, you're right. Here so we sampled right

in here, a solid gas sample.

MR. CHHATRE: Excuse me. Just put X in there regarding.

MR. GINTAUTAS: Okay.

MR. CHHATRE: Dots may not go through very well.

MR. GINTAUTAS: Okay. Okay. The -- this is the window well sample that LTE took on the 19th. This -- they took a gas sample here on the 27th. The -- the trench was here. I took a gas sample there on the 20th and LTE took one there on the 20th later in the day. The -- the work on the 10th which we didn't really sample, but we were doing a further grid here. The grid extends all the way down here at 50 or 75 foot intervals, goes through the backyard, some in the front yards.

The background readings are generally most everywhere except down here. There may be a few other ones somewhere else, but I think that was excavated on the 18th maybe. Mike, Joe?

MR. LEONARD: By the road?

MR. GINTAUTAS: Yeah.

MR. LEONARD: It wasn't done for --

MR. GINTAUTAS: A couple days.

MR. LEONARD: -- a week and a half.

MR. GINTAUTAS: A week, okay.

MR. LEONARD: Yeah, it was quite a ways down the road.

MR. GINTAUTAS: Okay.

MR. CHHATRE: Do you mind, like, you know, down the road maybe like 100 percent or --

MR. GINTAUTAS: Yeah.

MR. CHHATRE: Dots have no meaning to us.

MR. GINTAUTAS: And the instruments are calibrated with methane so they read that even if there's something else. It just is the way those instruments work.

MR. LEONARD: The name of that road?

MR. GINTAUTAS: Is Oak Meadow.

MR. LEONARD: It's 100 percent the volume of something, not necessarily methane. But something flammable.

MR. GINTAUTAS: Combust -- the instrument is calibrated with methane so you kind of get that reading but it -- it is a combustible gas. That's really all you -- until you take it to a lab or do something different with it. There are field instruments capable of making that differentiation, they're not necessarily that common.

MR. LEONARD: Okay.

MR. GINTAUTAS: It's usually -- it's better done at a lab. And we did -- we did sample there on April, no, May 9th, 8th, somewhere in there. I didn't do it. But I have -- there -- there -- I have data in our repository of data. And it's, again, a wet gas.

MR. LEONARD: Where -- where is your current sump sampling plan for -- up there? Do you have anything else that you need to do?

MR. GINTAUTAS: Yes, I said there -- there are -- there -- we

on the 10th had a geo probe which is a small push drill rig that can go down through soft things. And we put in some 1-inch holes down here, maybe here, and a string along here. And I don't know the exact distance but we put in several along the back of these houses here. They were for -- to allow us to monitor better. They're 10 feet deep. The 5 foot of perforated casing and then the top part is a solid casing and there's some bent night seal at the -- the 5 feet so that it will -- won't be getting oxygen down into the hole. They have a cap on them. We're trying to build a little sampling port so we can get data on a routine basis.

And I think John -- my supervisor's plan was maybe to get that done daily for a little while. We also put in a couple 2-inch holes over here that were designed to be vent holes so that gases come up in the higher part. I think this geoscientist which was who was doing a similar study for Anadarko was doing something similar. I don't know that they'd finished that when I left on the tenth. And I haven't conversed with anybody about that since then.

They reported to me when we were there that the greatest concentration of methane, or of combustible gases, let's put it that way, was at about 20 feet in the -- that hole that they put in there. Which I'm not really sure what depth the pipeline was ever at. That's part of my -- I'm surprised by it being at depth because the gas should try to -- it's buoyant. It should be coming up through the soil.

BY MR. CHHATRE:

Q. This is -- this is Ravi. So near the Oak Meadows, we are still getting gas readings at the depth of 80 feet you said?

A. 20.

Q. 20 feet.

A. 20.

Q. And what are the readings?

A. I do not know what they had. They just told me the highest reading they got in the hole was at 20 feet. I just -- I don't have a number for you.

Q. Okay.

A. I just don't know. And they had wandered about 26 feet and that probably -- compared to coming up, that's probably a barrier to most of the gas migration if there is really a water table there with water in the -- in the shallow aquafer. That would be something we are -- I know we've considered and I don't where it stands. And we've talked about putting in -- potentially putting in some monitoring wells to see what is in the water, if it's methane or if there's, you know, methane is -- could be traveling in a plume.

We've had one instance in Colorado that we know of where methane was high enough in the water and coming out of the water that there was a fire in the house in (indiscernible) Colorado about 12, 15 years ago.

Q. This is natural gas slipping out, no -- no leaks from

anywhere?
A. There was a well that nobody knew existed. It was a well from the 1930s that had -- there was not a record of. There -- there was another well nearby that the state had plugged using -- it was a so called orphan well. And they -- there had been an offset to it apparently that -- that we did -- that was not in the record. So the commission didn't exist until the '57, '59 or something that.

And the records going back in those places where people drilled a long time ago are not as accurate as they are now. So --

BY MR. McBRIDE:

Q. So do you know where it -- in that excavation they were doing by Oak Meadow Boulevard, do you know where they encountered the white or black --

A. I do not. It wasn't there and I just don't -- I -- I've hear --

Q. So if I told you it was at 7 feet would it surprise you?

A. Yes.

Q. It would surprise you if it was 7 feet?

A. Yeah, with the gas being that deep, yeah.

Q. I mean would it -- but the pipe is at 7 feet virtually throughout the whole --

A. Subdivision is deeper.

MR. LEONARD: This is Mike Leonard. At Oak Meadows Drive

that pipe is over 11 feet deep.

MR. LEPORE: But from a -- from a gas migration standpoint --

MR. GINTAUTAS: Yes, that's a prior -- yes, yeah.

MR. LEPORE: The gas -- it surprises you that the gas would go down instead of up.

MR. GINTAUTAS: There has to be something -- the road is a very good trap.

MR. LEPORE: Okay.

MR. GINTAUTAS: I'm not -- you know, it's within where -- where we were was just feet off the road.

BY MR. McBRIDE:

Q. But what I've heard a couple of times and I'm trying to get a handle on because I mean, you know, Anadarko's operating these facilities in -- in here. We're trying to work with you guys. I've heard two things now that -- that cause me a little bit of concern, is that you've seen as an anomaly. One is you've got, you know, gas -- gas concentrations in samples that are indicating to you that you're not getting a consistent reading that's surprising you with your experience. So, you know, that inconsistency's driving you to actually say that you're -- you're considering that there may be a second source which -- which is -- which is something that you're -- you said you have a heightened concern about. Is that --

A. No, it's more if it doesn't go away. If we've shut off the sources and we believe we have I would expect the gas at least in

the shallow stuff go away. It's a sandy -- if you've been out there it's a sandy -- I mean there's some clay in it, but the fill especially the top 2 or 3 feet is pretty friable sand. It just -- you know --

Q. But you understand where I'm going.

A. Yeah.

Q. We've got -- we've got enough variability now in the sample that we've got now a second spot now where we've got gas below where, you know, the point origin you would logically expect it to be -- with -- with a sandy soil which is another non -- not favorable thing for a trapping mechanism, correct?

A. It is true.

Q. Okay. So -- so now we've got --

A. So the ground would be the trap there.

Q. You know, so now I've concern of do I need to be looking for something else and how do I find it? So that's the -- that's the question. Do we -- do we have -- and have y'all looked at the records to see if there are any other wells in the area that weren't accounted for that might have been PNA years ago or do we -- do we -- can we -- can I take a snapshot of that?

A. It's not obvious from the -- the -- the our complete records. Yeah. We do have records of some historical wells, like, this area was not developed that long ago.

Q. And I apologize, man. I'm just -- I'm, you know, this stuff is just kind of going to my head. I sent my crew out there this

morning, you know, because I heard the same thing yesterday about 100 percent LEL at 20 feet. I'm -- I'm -- obviously you guys got to get out there and figure this out. Because this is not -- not good.

A. Yeah.

MR. CHHATRE: You're still asking questions.

MR. McBRIDE: Yeah, I have a few other questions. I wanted to get that first. Yeah. I just want to --

MR. LEONARD: Do you want to just grab the recorder.

BY MR. McBRIDE:

Q. Yeah. Yeah. I just wanted to -- to get your -- your impression, you know, with the -- with the sourcing, potential sourcing of gas that could cause something like this. I heard so far, you know, some -- some -- some really thorough thought going into it. You know, it had potential sewer gas that was looked at. You have potential, you know, utility gas. And the gas from a well. You know, we talked a little bit about, you know, methane sources from coal bed or biogenic sources in the area which are pretty well documented. Is there any other source that you can think of that could even potentially be out there, even if it is bizarre?

A. Well I -- I have wondered, but, again, it would be a different composition gas, if there might not be some swampy areas buried under -- this is near the old river -- I mean, the river, if you've seen all the gravel pits there you know that there's a -

- the Saint Vrain River is just north of there by a half mile or three-quarters of a mile. That's why the gravel pits are all there. That's gravel in this place, and I -- I do kind of wonder if there's not maybe some swamp gas. But that would be a much different composition and a different isotopic. It would not be what we've seen. But that's a possibility.

Q. Okay. So -- so from what you guys are seeing, you've seen in the analysis though it's safe to say that -- that -- that, you know, the defining characteristic that would cause you to consider, you know, a sewer is not present. So, you know, I'm thinking that you'd be looking for what?

A. Methane alone.

Q. Methane alone.

A. The bacteria don't really make ethane and propane.

Q. Okay.

A. So, I mean, you can get mixes of biogenic gas with thermogenic gas but again they have an isotopic signature. This is -- looks to be simply based on composition. It looks to be what we call thermogenic gas. And it comes, you know, it looks to be similar to the deeper sources that are being produced in that part of the basin.

Q. Okay. Okay. I mean, that would be the --

A. In composition.

Q. Would that be your same conclusions for -- for the biogenic --

A. Yeah.
Q. -- CBM type of gas? (Indiscernible).
A. Yeah, yeah. We know what isotopic -- we have a lot of data from that both from coal cores done by the USGS, 25 -- some length of time ago. It has a much different isotopic signature. And it also is basically 100 percent methane. No --
Q. So the variability that you think you're seeing in the gas then would logically lead you to conclude that it's either from a single source being degraded by heat or some other interference that you haven't yet figured out or you've got potentially a second source that you haven't accounted for.
A. Yes. Those are two working hypotheses, right.
Q. Okay. So I just want to make sure I captured what you're --
A. Right those are -- you know, if -- in monitoring over some length of time, we don't' see reductions in the soil gas concentrations, that leads to the other -- the -- the second part of that that maybe there is another well, another pipe, a natural seep. We've not seen natural seeps of gas from that deep in -- in well -- you know, in this part of the (indiscernible). I don't -- there are places in the world where gas comes up from depths like that to the surface and causes problems.

I -- I don't -- it doesn't -- it doesn't necessarily not happen here but we don't -- we've never been able to find any. We've done -- so I'm actually looking about it because we -- we've actually considered that as a possibility for some of the water

well impacts.
Q. Yeah.
A. And we've not been able to find -- we've had driving surveys. I don't even think I mentioned that. We had a driving survey done of the neighborhood with a very sensitive methane and heavier hydrocarbon detector. I believe the detection they saw was at the road there and in the driving survey not really much of anything else except maybe a sewer vent. And that the capability -- it has a detector. And it has the capability of doing methane and heavier hydrocarbons separately. So you can tell whether it really is just sewer gas or a produced gas.
Q. Okay. And the last question I guess I have for you. Y'all set up a perimeter, it sounds like, along the fence from the homes that are occupied. Anything that -- that -- I guess the apartment complex is no -- is not yet occupied?
A. It's not.
Q. Okay. So -- so --
A. It's -- I mean, I don't know -- some of those are coming close to getting done. I'm not going say it's not going be in the next few months. But at least one or two -- one building anyway. I don't know -- I don't think we've seen anything in that direction yet that would lead us to -- to -- I'm not saying we shouldn't maybe look again. But I don't believe right this instant the -- the data I've seen from what happened before the 10th didn't lead me to think that that -- it seemed to be follow -

- you know, in the line of that pipeline, whether it's following the pipeline trench because it's -- you know, you've loosened up the soil, you know, 30 years ago when they put the pipeline in.

We do certainly think we've seen that in other places where the gas follows the easiest route which might be a pipe, you know, any kind of trench, not a -- a water pipeline, you know, whatever. We've seen that at people's houses where it followed it back to the house from the water well in a trench. And we've mapped it out and kind of got -- got worried about what was coming in their basement. So that -- that is possible. It's just a disturbed area. It's not as compacted. You've broken it up. It may be an easier place both to vent vertically and horizontally. So.

Q. You said you were familiar with another event where a house exploded from an old well that was leaking underneath it. Where was that?

A. It was in Las Animas County.

Q. Las Animas?

A. Yeah. It was a plugged and abandoned coal bed methane well that was leaking. It was not -- either had -- the plug had not worked or something else had happened.

Q. Okay. When was it?

A. April 17th of 2007.

Q. Oh geez.

A. I looked it up.

Q. Exact same date?

A. Yeah.

MR. LEPORE: Same day.

MR. GINTAUTAS: I had to look it up. I really didn't -- I was down there. I remembered it was the middle of April and I had to look in our records because I didn't really believe it. Yeah.

MR. LEONARD: (Indiscernible).

MR. GINTAUTAS: Yeah.

MR. LEONARD: One year to the date in the same town, but it was totally unrelated.

MR. GINTAUTAS: Yeah.

BY MR. McBRIDE:

Q. Utility gas, you haven't yet seen the analysis?

A. I have not. I have not any -- not any from sampling. I -- I -- I think that John Axel, (ph.) who's my supervisor, went out and found their MSDS sheet for what the product that they provide. And it had a range. And I think was maybe 95 to 97 percent methane, and, you know, they may not have even said what the other parts were. That's not the ratio we're seeing in these. That's a pretty dry gas. And -- and that's what I'd expect to get -- to get the 1,000, 1,010, 1,020 BTU per cubic foot. You can't have that much propane in that -- in that methane in there. Their BTU content is quite a bit higher.

Q. Well while you were on site have you -- did you hear anybody reference or talk about the utility backed gas, basically utility companies responding straight from the pipeline (indiscernible)

equipment into the system?
A. I have not.
Q. Okay.
A. I -- I --
Q. Somewhere that came up.
A. I -- I personally have -- I don't -- I didn't --
Q. Post notes --
A. -- hear it. I --
Q. Okay.
MR. LEPORE: Could you repeat the question? I didn't --
MR. LEONARD: Somewhere I was just trying to find out if that come from the site. Somewhere somebody had communicated back that the utility was taking the gas and de-highing (ph.) the gas that was (indiscernible) from the field. They weren't stripping any of the -- they weren't -- the weren't --
MR. GINTAUTAS: The heavies.
MR. LEONARD: The heavies out of it, and just -- just putting it in the pipeline for sale.
MR. GINTAUTAS: Wow. I have not --
MR. LEONARD: Now, you know, sometimes they do that if they -- if you're -- if you're producing gas that's pretty much predominantly methane.
MR. GINTAUTAS: Right, yeah.
MR. LEONARD: You're at 1,020 BTU or something like that.
MR. GINTAUTAS: Yeah, yeah.

MR. LEONARD: You can do it, but you typically don't leave the heavies in it.

MR. GINTAUTAS: The only place that that -- that was done in Trinidad. Not when I -- it's -- CIG kind of put a stop to it. But the -- one of the operators had agreed to sell the coal bed methane directly to the city of Trinidad in the '90s and did it for several years. And they had their little -- they had their own odor in plants and --

MR. LEONARD: Yeah.

MR. GINTAUTAS: But I've not heard of that other than in CB -- you know, something that really is 99 percent methane.

BY MR. LEONARD:

Q. Yeah, I was just curious. I didn't know if they came from the site or came from somewhere else.

A. I -- I didn't hear it there. I don't -- I don't know where -- I don't know who, you know, who Black Hills -- it may be a bunch of people they buy stuff from. But I -- I don't know.

Q. That's all I've got. Thank you. I appreciate it.

BY MR. AJIBOYE:

Q. This is Gbenga from PHMSA. (Indiscernible). How -- let me repeat, how possible is it for propane to be present in produced gas? Is it --

A. It is.

Q. So if propane is trapped in 10 feet do you know how it will react in this situation?

A. Well, that's a -- that's a good question. I -- I'm not -- we haven't usually, you know, propane is heavy enough maybe to stay there too. It certainly should be a gas at the temperature at 5 or 10 feet but it's certainly a heavier gas. And it's certainly not as buoyant. We don't -- I don't think we know.
Q. So you don't know if it can come up or go down?
A. Well, I think it can. I just don't -- I don't know. We've not studied it. And I've never seen a study of that in the soil.
Q. Okay.
A. I'm -- I'm not -- there may one there. It's just I -- I've looked at many studies of soil gas and impacts like this and I've never seen anybody describe that. I have either in a discussion with one of the fire people today or previously, it has -- the question came up does the propane go any -- does it migrate up? And it -- it may migrate at a different speed. I don't necessarily think it's going to go down. But it may migrate at a slower rate. And that may be why you see some differences in composition and stuff that you -- methane being very light is gone and maybe it takes longer for the ethane and propane to come along.
Q. So you can definitely say that it's not possible for pentane to --
A. Pentane is --
Q. Because it's heavy.
A. It's -- it's almost a liquid at this elevation. It's -- at

25 degrees it's about -- I've used it in labs here. It's -- it's a liquid, but it boils away very rapidly in -- in the room. It's not very useful here in Colorado. It is still liquid at this kind of temperature at sea level because there's more pressure. So I don't -- I think pentane would still come up. It just might take longer.

Q. But you don't believe it can go down, right?

A. I -- I don't --

Q. Because it's kind of --

A. -- think it's that -- it's still a gas probably here because the pressure. I think the gases are going to be buoyant compared to water.

Q. But should that be any kind of liquid in the line? What will happen? An actual liquid, like crude?

A. It probably would go down with rain, you know, water percolating through the soils there and go into the water table and that's one of the reasons to think about having a -- a monitoring well.

Q. And how -- how frequent is it for liquid to come associated with those gas in the produced well? Is that common?

A. It is in -- but it -- I think this may have been after, if I understood it, this gas was after the separate maybe. I'm not sure of that.

MR. LEONARD: I'm sorry?

MR. GINTAUTAS: It's the gas that was in that line after the

separator.

MR. LEONARD: No.

MR. GINTAUTAS: No. It was right out of the well.

MR. LEONARD: Yes.

MR. GINTAUTAS: There -- there certainly are things that could be liquid at -- at lower -- I mean they're not going to be high but they certainly could be there.

BY MR. AJIBOYE:

Q. And if they are there it's possible you have migration --

A. Down.

Q. -- both up and down, right?

A. Yeah, yeah.

Q. I mean, just --

A. Yes.

Q. Okay.

A. Most of those gases have things like benzene in them.

Q. Yep.

A. The benzene is heavier. It's not as volatile. It would probably go down with rain. It's quite soluble in water. If that was there that would be an indicator probably of -- of migration downward as well.

Q. And that could -- you can -- what kind of hypothesis can you bring up from that possibility? Because now you're going 20 feet and you're getting 100 percent, right? From just coolers (ph.)?

A. Yeah. I -- I mean it certainly could happen.

Q. Okay.
A. I don't -- I don't know enough about that particular well and whether, you know, I didn't -- I've looked at the production or if I don't remember if it made liquids, much liquids or not. In terms of hydrocarbon liquids I don't think it did. But there still is a heavier component in the gas phase.
Q. Okay.
A. And -- and that could go in another direction.
MR. AJIBOYE: That's it. I'm done.
MR. CHHATRE: Okay.
MR. LEONARD: I have a question.
MR. CHHATRE: Go ahead.
BY MR. LEONARD:
Q. Mike Leonard. Peter, on this -- on this drawing of -- of the subdivision you notice there's a -- there's a line that says, existing gas line to be -- what does it say? Relocated?
A. Yes.
Q. Okay. Do you know if that line is still there?
A. I do not. I looked at this. Stewart had this outside this morning. And we looked at it. And I don't. That -- that's why I have Duke (ph.) in my head and not -- DCP in my head and not --
Q. My second question would be --
A. I don't know.
Q. -- where the existing current flow line or the -- the old flow lines, where they cross, is that -- if that line wasn't

relocated, is that potentially near where --
A. Yes, yes, it is.
Q. Okay. And would the gas composition be the same in that line?
A. It -- it could still be. If it's on their way to the gas plant, not on their way to -- after the gas plant --
Q. On the way back.
A. If it's --
Q. If it's being gathered, not --
A. Yes, yes.
Q. It could be the --
A. Yes.
Q. The composition could be the same.
A. Yes, it could.
Q. So we could throw this back at --
A. And then -- yeah. That's --
Q. Maybe he could go --
A. Right, yes. That -- that one -- there is a marker right here today and it says it's Black Hills Energy. Right at this corner. I -- I saw it the other day and I -- I watched the utility -- I -- I didn't know whose it was and I watched the utility locates guy go up to it. And I -- I -- we went over afterwards and it said it was Black Hills Energy. Right at this corner of Firestone Boulevard.
Q. Have you been to the -- the tank battery? The coolers tank

battery?
A. No. I have not.
Q. There is a header there as well. And I don't remember what it says. I think it's Black Hills because I smell (indiscernible) every time I go by there.
A. Yeah. I have not been to the --
Q. Okay.
A. -- to the battery to the west.
MR. CHHATRE: You done?
MR. LEONARD: I am done.
MR. CHHATRE: Okay. (Indiscernible) NTSB. (Indiscernible)
MR. GINTAUTAS: Okay.
MR. CHHATRE: -- really soft.
MR. GINTAUTAS: I don't but -- I laugh loud.
BY MR. CHHATRE:
Q. I've got a couple of questions. Where is that house that you said exploded pretty much the same date a few years ago, on or about, can you -- do you have a report on that? Did the -- can I just -- provide that or add on my wish list, the report?
A. Yes.
Q. That you guys did.
A. It's on the website. But we can find it for you.
Q. Okay.
A. It's the Bouvier (ph.) house.
Q. Okay. So just want you to repeat because there's a lot of

discussion between you and -- and Anadarko. So what your hypothesis -- can you restate those two hypotheses again and under what circumstances? Just for -- and so nobody interrupt, and please don't interrupt no matter how eager you are. Let me ask questions.

A. One hypothesis, you know --

Q. Just tell me for what -- what fact you are --

A. For what fact is, you know, is -- is the source shut off is the question? One possible answer is yes. The gas levels in any -- any of the soils should be decreasing because it's been shut off for 3½ weeks now. And it probably should be decreasing where there's not a cap over it at a pretty rapid rate because the soils are sandy and there -- there may be some changes deeper. But they're -- they should be permeable and porous from what I've seen at the top 7 or 8 feet anyway. Which means the gas should migrate up.

So that's, you know, a testable thing that we intend to do. If it doesn't go down, or doesn't go down very rapidly a thought would be that there is a second or a source. Whether it's a second or a third or whatever, a source that is still active providing gas to the soils there. That again would be seen if the -- the levels don't change in some of those ones that were 100 or more by putting in other wells and monitoring over time. It's not going to be a short term fix really. But -- and then that would require more investigation on our part and whosever it might be

that we thought that source was.

Whether it be a -- you know, if it ends up being a -- a sales pipeline that we have somewhat limited authority over that would probably end up going somewhere else for further investigation, too. But that's, you know, there is a trace on there of a -- of a sales line that I don't know if it's there or not. I don't know if it ever got removed and it is in the same pathway where the road is where we've seen, you know, it crosses right there supposedly, or it did. That's where we're seeing the highest readings on the road is right where the two pipelines -- the pipeline traces cross each other right there.

Q. Can you tell me what do you mean by sales gas? What -- what --

A. Well, it's after -- if it's been through processing plant, it's been sold, you have something --

Q. Dehydrated and cleaned up, is that --

A. Cleaned up.

Q. Okay.

A. You know, but it could just be that it's changed custody to one of the midstream companies. And while we have some regulations about midstream operations, they aren't very -- they're -- we're not -- maybe not really that effective because we're not really the regulator for the midstream.

Q. Okay.

A. And the downstream stuff we're certainly not. So it's kind

of a -- you know, if it comes to be something else, if it's the line going to a gas plant where they do the dehyd and separate ethane, propane off to sell separately the composition would look very similar to what we see now. If it's after the gas plant and it's on its way back to somebody to sell -- buy it then it would probably be the methane mix that we're talking about with the 1,000 or 1,050 BTU content. That's not what we're seeing.

So I -- I don't -- I mean I just don't -- so far there's nothing indicating a higher level -- you know, a methane -- a high methane concentration that's only with the gas of 1,000 or 1,050 BTUs. The -- the calculations that I saw from the gas samples from the soil were like the -- if it was pure hydrocarbons it would have been 1,300 BTUs. That's probably very much like the production gas --

Q. Okay.

A. -- that we have samples for.

Q. And what is your second hypothesis? You say that that's one hypothesis.

A. Well that's -- those are two really. They're two --

Q. Which one?

A. It's been shut off or it hasn't been shut off.

Q. Okay. All right.

A. You know.

Q. Now, going back now you said the readings are not decreasing. So all the readings we have taken so far, all of them are not

decreasing?
A. I -- I don't -- I -- I haven't compiled enough to say. I -- we're -- we're just started doing the -- the row along there.
Q. Okay.
A. The -- the row got put in on the 10th. I believe we've checked it a couple times. I think John came yesterday and did a -- and I'm just not going to say I know the data yet.
Q. Okay.
A. I -- the row along the houses mostly were background level. There are some -- there are some points that we put in right now where these -- the two lines -- the point we were just talking about where the two pipelines cross, where they're 100 percent. I don't know what's happened to those.
Q. Okay.
A. I -- I'm just not, you know, in a -- I just don't know.
Q. Now you use the terms and you say only for the record, I think I know what you are talking about, but you said upstream, midstream, and downstream. Just for the record, just clarify.
A. Okay. My understanding of those, upstream would be the -- the actual exploration and production companies here. Oftentimes they have a pipeline company. So there may be a midstream component that's kind of the transportation out to, you know, the -- maybe the gas plant or the gas plant itself. And then the downstream would be the sales, you know, going to an end user.
Q. So from --

A. That's my, you know, way I explain it.
Q. So from the well head up to the dehydrator or separator is upstream, or that's a midstream.
A. Maybe to a -- maybe to a sales point because some of the sales points are not at the gas plant. They're somewhere else where it's measured.
Q. Okay.
A. I -- I'm -- there -- there's a lot of different ways it changes hands. And sometimes like when it's oil there's machines there. There's automated custody transfer things. I think we talked to those.
Q. It is something before the -- your midstream and upstream is before (indiscernible) begins in gathering line.
A. The upstream would be to me the gathering lines.
Q. Okay. Good enough.
A. The midstream may be that it's transporting it. It's been sold but it's transporting it to the gas plant because it was sold over here. And then it goes in the say DCP might can fall in that category here of a midstream line. And they have a lot of pipelines out there to this day because -- and we deal with spills from it because the spills are considered EMP waste. Because it's the -- it's the product out of the ground. But the pipeline regulation is perhaps more dicey as I understood.
Q. Good enough.
A. I think it might have gone to court even.

Q. Now, what -- what do you consider soil here? What I heard on the scene, and I'm not saying that's true or false, that -- that the area was filled with sandy soil. The developer did that.
A. Where the house is I -- I believe that the top -- I didn't see the exact line in the trench. But the aerial photos indicate 3 years ago there were hundreds of piles of dirt that had been dumped by dump trucks and they were levelled out.
Q. So my question I guess --
A. Where that's -- where that house is. I don't know how much of that area is fill.
Q. My question, I guess, you said the soil here is sandy. Could that be a reason for sandy? Or I guess where I'm heading there, what's the actual soil, (indiscernible), bentonite, this strata here?
A. What I've seen is more sandy --
Q. Than (indiscernible).
A. -- quartz sand, yeah.
Q. Okay.
A. I -- what I've seen at the top. I don't -- I can't say that I -- I saw the excavation at the house. It looked pretty sandy.
Q. Okay.
A. But the -- the narrow one then with the hydrovac stayed up. So there is some clay in it. It didn't just collapse. The one done with the backhoe up by the house collapsed on itself because it -- it wasn't supported. And it -- it -- it's what - it's

sandy. It still may have a fair amount of clay in it. It just wasn't holding -- enough to hold it together.

Q. Hold it together. Okay.

A. Yeah.

Q. So because this really concerns me. So what is the game plan moving forward for you guys to -- to grid it out where you're seeing the readings, or to put an entire grid in the background, or -- I mean if you have this 100 percent pocket, are you planning to move around it and see where -- where the gas is coming, or?

A. We have a grid across there. I didn't try to show it there. But I believe we're somewhere up in the middle, low 60 number of points and I think most of them are 50 feet apart, something like that. And there -- there are several rows of ones coming from near the house or to the east of the house even then going over to the road and past the road.

And if we need to, if it seems like it's migrating we'll follow it or we'll -- if we come to some understanding of whose gas it is we probably put that monitoring off on the -- the operator.

Q. So is the plan -- does the plan include this -- what you suspect is --

MR. LEPORE: So, I'm sorry. I have to interrupt.

MR. CHHATRE: Sure.

MR. LEPORE: Peter has not been the most involved person of our staff.

MR. GINTAUTAS: No. Yeah. In that part, yeah.

MR. LEPORE: On all of this.

MR. CHHATRE: Yeah, okay.

MR. LEPORE: And so I understand your concern. I'd like to suggest we will talk to you off the record.

MR. CHHATRE: That is fine.

MR. LEPORE: I can talk to you about it.

MR. CHHATRE: Off the record.

(Whereupon, the interview was concluded.)

CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF:	HOUSE EXPLOSION IN FIRESTONE, COLORADO, APRIL 17, 2017 Interview of Peter Gintautas
ACCIDENT NUMBER:	DCA17FP005
PLACE:	Longmont, Colorado
DATE:	May 12, 2017

was held according to the record, and that this is the original, complete, true and accurate transcript which has been transcribed to the best of my skill and ability.

[redacted]
Rebecca Thompson
Transcriber