STATE OF NEW MEXICO
ENERGY, MINERAL AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION

ORIGINAL

APPLICATION OF THE NEW MEXICO OIL AND GAS ASSOCIATION FOR AMENDMENT OF CERTAIN PROVISIONS OF TITLE 19, CHAPTER 15 OF THE NEW MEXICO ADMINISTRATIVE CODE CONCERNING PITS, CLOSED-LOOP SYSTEMS, BELOW GRADE TANKS AND SUMPS AND OTHER ALTERNATIVE METHODS RELATED TO THE FORE GOING MATTERS, STATE-WIDE.

CASE NO. 14784 AND 14785

VOLUME 1

May 14, 2012
9:00 a.m.
Wendell Chino Building
1220 South St. Francis Drive
Porter Hall, Room 102
Santa Fe, New Mexico

THE COMMISSION:

JAMI BAILEY, Chairperson

GREG BLOOM, Commissioner

DR. ROBERT BALCH, Commissioner

MARK SMITH, Esq.

FLORENE DAVIDSON, COMMISSION CLERK

REPORTED BY: Jan Gibson, CCR, RPR, CRR
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EXHIBITS

(Note: In session at 9:00).

CHAIRPERSON BAILEY: This is a meeting of the Oil Conservation Commission on Monday, May 14, 2012 in Porter Hall in Santa Fe, New Mexico. I am Jami Bailey, Chairman of the Commission. To my right is Greg Bloom, who is the designee of the Commissioner of Public Lands. To my left is Dr. Robert Balch, who is the designee of the Secretary of the Energy, Minerals and Natural Resources. To Mr. Bloom's right is Florene Davidson, the Commission Clerk. To Dr. Balch's left is Mark Smith, counsel for the Commission, and then we have Jan, who is the court reporter.

A quorum of the Commission is present to we will proceed. Dr. Balch, have you had a chance to read the Minutes from the previous hearing?

COMMISSIONER BALCH: I have.

CHAIRPERSON BAILEY: Scott Dawson, who was the Commissioner of Public Lands designee for the previous month, have you had a chance to read the Minutes of the previous meeting?

MR. DAWSON: I have.

CHAIRPERSON BAILEY: Do I hear a motion for me to sign on behalf of the Commission?

MR. DAWSON: I will motion.

COMMISSIONER BALCH: I will second.

CHAIRPERSON BAILEY: All in favor?

RESPONSE: (Aye)

CHAIRPERSON BAILEY: We will also be signing the order for Case No. 14752, which was the application of Centrex Energy Company of Colorado for approval of the water disposal well in Eddy County, New Mexico. Mr. Dawson, did you have a chance to look at the draft order?

MR. DAWSON: I have.

CHAIRPERSON BAILEY: Dr. Balch?

COMMISSIONER BALCH: I have also.

CHAIRPERSON BAILEY: Do I hear a motion to adopt the order as drafted?

MR. DAWSON: I will motion.

COMMISSIONER BALCH: I will second.

CHAIRPERSON BAILEY: All in favor?

RESPONSE: (Aye).

CHAIRPERSON BAILEY: I will transmit these documents to the Commission Clerk.

CHAIRPERSON BAILEY: I now call Consolidated Cases 14784 and 14785. Case 14784 was the Application of the New Mexico Oil and Gas Association for Amendment of Certain Provisions of Title 19 Chapter 15 of the New Mexico Administrative

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Code Concerning Pits, Closed-loop Systems, Below-grade tanks, Sumps and Other Alternative Methods Related to the Foregoing, and amending other rules to conforming changes state-wide. Case No. 14785 is the Application of the Independent Petroleum Association of New Mexico for Amendment of Certain Provisions of Title 19 Chapter 15 of the New Mexico Administrative Code Concerning Pits, Closed-loop Systems, Below-grade Tanks, Sumps and other alternative methods relating to the foregoing and amending other rules to conforming changes state-wide. I call for appearances.

MR. CARR: May it please the Commission, my name is William F. Carr with the Santa Fe office of Holland and Hart. I am appearing today with my partner, Michael H. Feldewert and Eric L. Hiser with Jorden, Bischoff & Hiser from Scottsdale, Arizona. Together we represent the applicant if in Case 14784, the New Mexico Oil and Gas Association.

MS. FOSTER: Good morning. My name is Karin Foster. I'm with Chatham Partners representing the Independent Petroleum Association of New Mexico.

MS. GERHOLT: May it please the Commission, Gabrielle Gerholt on behalf of the Oil

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Conservation Division.

MR. JANTZ: Eric Jantz, New Mexico Environmental Law Center for interveners, Earthworks, Oil and Gas Accountability Project.

MR. BRUCE: Jim Bruce of Santa Fe representing Nearburg Producing Company.

MS. CALMAN: Good morning, I'm Judy Calman and we are representing ourselves along with the Sierra club, the Wilderness Society, New Mexico Wildlife Federation, the National Wildlife Federation and New Mexico Back Country Group.

MR. DANGLER: Madam Chair, Hugh Dangler on behalf of the Land Commissioner, Ray Powell, from the State Land Office.

DR. NEEPER: I am Don Neeper. I am representing New Mexico Citizens for Clean Air and Water, appearing pro se.

MR. FORT: I am Patrick Fort and I represent Jalapeno Corporation.

CHAIRPERSON BAILEY: First we will take up two motions that have developed. One is the Motion to Disqualify, and that Commission Member's Fully Disclosed Information Relating to their Possible Bias and Lack of Impartiality, and Application of the Independent Petroleum Association for a Motion

to Recuse Commissioner Greg Bloom. I would like to hear arguments on the first motion by New Mexico Oil and Gas Association.

MR. CARR: May it please the Commission, in regard to the motions, all motions to disqualify, we have a very brief general statement we would like to make. We would like to point out that this is a rule-making, not an adjudicatory proceeding. We stand before a commission that was created by the Oil and Gas Act, and the Act provides that the commissioners are persons who have expertise in the regulation of oil and gas. You have other jobs, you have other responsibilities. But these jobs and responsibilities involve virtually every aspect of every rule-making that comes before this commission, and it's hard for me today to imagine a commissioner who meets these statutory requirements that would not be familiar with the Pit Rule, that wouldn't have opinions or thoughts on the Pit Rule.

And I think this is what the legislature must have anticipated when it required people with your expertise and competence to sit on this commission and hear cases of this nature. I think prior statements made by any commissioner or any officer do not necessarily disqualify that

individual from sitting and hearing a case as long as they are able to judge fairly the evidence that is presented because statements made before the case was presented actually only, for me, enable me to focus on where your concerns really are and try to develop a case that will actually be more meaningful and useful to you.

We have had all sorts of procedural maneuvering in this case and here we are again the first day of the Commission trying to disqualify the Commission. I think if you step off, you set a very dangerous precedent. I think if you recuse yourself, you are, in fact, letting the expertise you have on the regulation of petroleum production become a liability, not the precondition to your service that is required by the legislature. This is too important an issue to be changing players the morning of the hearing, to be changing the commission today, and we would ask you if you feel you can honestly decide the case to stay, to hear the case and deny the motions for disqualification.

CHAIRPERSON BAILEY: Mr. Fort?

MR. FORT: There's two issues that deal with the designee from the Commissioner of Public Lands. One is that unlike the OCD, which has

statutory jurisdiction and authority, the State Land Office has entered an appearance on behalf of both the Commissioner of Public Lands and the State Land Office. It has to deal with now they are parties of record that appear before Commissioner Bloom. And as such, you have, if you look to the Judicial Code of Conduct, when you disqualify a judge he is either a party to the proceeding or an officer or somebody who is actively a participant in the affairs of the party. And as I understand it, Commissioner Bloom is an Assistant Commissioner of Mineral Resources from the website. It's my understanding as well that he was appointed by the Commissioner of Public Lands and that he is an officer, if you will, of State Land Office, a public officer. So from that standpoint, they have that conflict. It's inherent just by the filing of the motion.

The second issue and probably the greater issue in this case -- and I understand what Bill had said about your expertise and I'm not here to question your expertise. That's not an issue. The issue is whether or not I'm going to have due process before this hearing for having a fair and impartial hearing.

In the statement filed, the prehearing

statement, it wasn't to designate that we are going to call certain technical witnesses. It wasn't to say that we are going to cross-examine, but the implication by filing an entry of appearance, that's the very case. But it was to go through about eight different points of the NMOGA and IPANM's filing to say, "Here is what we agree with" -- or basically I should say they didn't agree with much, but basically it was that we don't think this is justified. I could walk through each of these eight points.

Let me do that because it is instructive. The first one is that this is the Commissioner of Public Lands or his designee has a -- his job while sitting on this Commission is to represent the trust, the land trust that the Commissioner of Public Lands is the trustee for, and they have a dual interest in this. One is to make sure that we get the maximum dollar from these resources. The second is to protect the environment.

It goes on to say -- and he says later, "Our fiduciary obligations require us to review these amendments very carefully." Then they go on to file this prehearing statement. As such -- again, as I said, this is not a prehearing statement

per se because they are not presenting technical evidence or wanting to cross-examine but for their entry of appearance. But what it goes on to say, and by making this statement about the duty that Commissioner Bloom has, he is committed to this statement because this is their fiduciary obligation under the state trust lands.

As to the closed-loop system, they would ask that any action be deferred until good science supports the change. They have already prejudged the evidence today, whatever it might be, that it's not good science.

The siting requirements, they say to date there's no technical or regulatory basis -- does not support a change in the siting requirements. They prejudged the evidence they are about to hear.

We talk about the time frame for temporary pits, the drilling pits. They said there is no basis offered for more than six months for a temporary pit for these drilling operations. Again, they prejudged the evidence. It goes on. The volume for temporary pits, proposal not justified. Prejudgment.

On-site burial trenches. We want you to deny the proposal. Low chloride, it's too high

based on other jurisdictions. Again, they have prejudged this proposal. Steel tanks for hydrocarbon-based drilling fluids. This is the current safety standard. Eliminating it would violate the protection of groundwater. Again, prejudgment.

They go on to cite some of the record or at least part of the record from Pit Rule, the original Pit Rule 17 about the some 6- to 7,000 leaks. They were narrowed down to about 400 but there was an interesting exchange of letters that occurred between the Former Secretary of Energy and Minerals and Natural Resources and Senator John Arthur Smith in a letter dated December 2000. And the gist of it was that there was a lot of bantering about between NMOGA and the OCD regarding how many drilling pits actually cause leaks. We're not talking about permanent pits; we are talking about drilling pits.

And the gist of it was NMOGA took the position there weren't any drilling pits of those 400 they listed. Finally there was a letter that narrowed it down from the past Secretary of Energy and Minerals and Natural Resources limiting it to 16. I went in and looked at the 16 or least a few

of the 16. One, I think, was in the northwest and was too close to a river. The others were in the southeast in the Permian Basin. What it amounted to is either there was soil contamination or there was water contamination. For the soil, they went in and took out the soil and removed it. For the water contamination with fluorides they dewatered underneath the pit and reused that in drilling operations. That was the extent of those leaks.

They come out and say look, the maximum chemical concentrations for closure should not be for Benzine -- the Commissioner of Public Lands would recommend it be denied and the conclusion is that this Commission should defer adopting rule changes pending further scientific evidence.

Well, my problem with that statement is, one, they have prejudged even before what they have heard today. So these statements are attributed to Mr. Bloom. Mr. Bloom has never had a chance to speak. I'm sure that he will want to speak to this, but at the same time, it's nothing that Mr. Bloom said, it's what his employer has said about what their duty is.

So with that -- plus the law is -- is isn't that you have to show somebody is biased or

prejudiced. What you have to show is that there is an indication of possible partiality or bias. That's all you have to show. And I think their statement is replete with prejudging not only the evidence they have read so far but the evidence they anticipate being presented here today.

So for those reasons, I would ask that Commissioner Bloom be recused. Again, this is nothing based on what he said but what the Commissioner of Public Lands has said and being a party to this proceeding. Thank you.

CHAIRPERSON BAILEY: Mr. Jantz, it was your motion to disqualify Commissioner Bloom.

MR. JANTZ: Yes, thank you. Madam Commissioner, members of the Commission, I just want to be very brief. I think our motion speaks for itself for the most part. I want to address one thing Mr. Carr mentioned. While this is a rule-making proceeding and not an judicatory proceeding -- the courts have already made that determination -- the public is entitled to an impartial panel to decide this very important matter of policy. And as a party, OGAP has certain due process rights guaranteed as a party under the statute, under the Oil and Gas Act. One of those

due process rights is the opportunity for a fair and impartial tribunal to decide this important policy issue.

Based on the statements from Dr. Balch's website and his association as a consortium partner with the independent producers, we believe that that indicates a prejudgment of at least the economic aspects of the Pit Rule and a predisposition to repeal essentially the existing Pit Rule in favor of Independent Producers and NMOGA's amendments.

With respect to yourself, Madam Chair, and with all due respect, some of the meetings and the series of meetings and the timing of meetings on your calendar which OGAP received through public information requests indicate there may have been some discussion or possible discussion about the Pit Rule with representatives from NMOGA and individual representatives from the oil and gas companies indicating a potential for biased decision-making. Simple disclosure of the substance of the meetings I think would satisfy OGAP in terms of the bias issue.

With that, Madam Commissioner, I suggest that we would ask that at least those disclosures be made on your part and Dr. Balch recuse himself. Thank you.

CHAIRPERSON BAILEY: Ms. Foster, do you have any argument?

MS. FOSTER: Madam Chairwoman, actually very briefly as to the argument that Mr. Fort made. He represents Jalapeno Corporation so I want to make sure that the record is clear that was a motion brought by Jalapeno Corporation, not the Independent Petroleum Association.

In regards to Mr. Bloom, I'm sure that while his boss might be making some statements in the media or did make a prehearing statement, that Mr. Bloom will keep an open mind and assess the testimony presented to him and he understands his statutory requirements as a commissioner of the Oil Conservation Commission and we hope he will follow the statutory requirements. Thank you.

CHAIRPERSON BAILEY: Ms. Gerholt, do you have argument?

MS. GERHOLT: Thank you. The Division would like to point the Commission to New Mexico Statute 70-2-4 which sets forth that the Commission is to be comprised of the designee of the Commission of Public Lands, the designee of the Secretary of Energy, Minerals and Natural Resources and the Director of the Oil Conservation Commission. No

argument has been made that any member of the Commission is not exactly that.

Finally, the Division would also point you to that your decision made in this rule-making will have to be based upon the evidence before you. If a decision is made not on the evidence but upon an opinion, it is reviewable and that is a remedy that is already in place. Thank you.

CHAIRPERSON BAILEY: Mr. Bruce, do you have anything?

MR. BRUCE: Madam Chair, I support both of the statements made by Mr. Carr and the Division's counsel.

CHAIRPERSON BAILEY: Ms. Calman?

MS. CALMAN: We would support Mr. Jantz' decision.

CHAIRPERSON BAILEY: Mr. Dangler?

MR. DANGLER: Thank you, Madam Chair. Because of the district court decision in a related matter to this case, it does appear this is not an judicatory hearing. Otherwise those arguments would be very well taken. Because of the nature of the proceeding I think Mr. Carr's statements are right on the money that the legislature intended for people to have opinions and to have knowledge and

that that's not a bad thing.

I also agree with Mr. Carr, who must have been a salesman at a previous time in his life, that unless you hear what the objections are, it's difficult to overcome them and present the best case you can and the intention of the prehearing statement from the Land Commissioner was to express the concerns of the Land Commissioner and it was noted throughout that document that this was based merely on a reading of the current rule and the changes that have been proposed without benefit of having seen the filings of NMOGA or of IPANM, without having the benefit of any evidence before the Commission, and we would submit that our designee is able to sit with an open mind and view the evidence that's before the Commission. Thank you.

CHAIRPERSON BAILEY: Dr. Neeper?

MR. NEEPER: We make no statement on either motion. Thank you.

CHAIRPERSON BAILEY: Mr. Smith, what is the law?

MR. SMITH: I make no statement. (Laughter).

MR. SMITH: Well, I think prejudgment of

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an issue is something that is extremely difficult to show. Under New Mexico laws, I appreciate it. The point is not simply whether evidence supports a claim of bias but what type of bias.

There are five that I can see that are recognized. One is prejudging a point of view about a question of law or policy. Even if that prejudgment is so strong as to suggest a closed mind, that is not without more disqualification.

A second would be prejudgment about a legislative fact. Same result. Not without more reason to disqualify. Advanced knowledge of a judicatory fact, same thing with the Commission. Not a reason to disqualify.

Now, a personal bias or a personal prejudice against one of the parties, that is a reason to disqualify. It is true that you are not expected -- no commissioner is expected to come in with a blank slate. As a matter of fact, I think it is also accurate that many of you are here because you are not a blank slate.

So without commenting on whether the evidence that anyone has cited is sufficient to excuse or recuse anyone, I can tell you that as I read the motions, the allegations in there do not

support the type of bias that would require excusal or recusal or anyone's part here.

CHAIRPERSON BAILEY: Okay.

MR. SMITH: With respect to the desire to have the commission voir dired, I know of no authority for that. And with respect to the request that various documents be produced, that seems to me to be a RCRA matter and it should requested under RCRA as opposed to this sort of motion in a rule making setting.

CHAIRPERSON BAILEY: Thank you. Commissioner Balch, are you inclined to excuse or recuse yourself?

COMMISSIONER BALCH: I am not inclined to recuse myself.

CHAIRPERSON BAILEY: Commissioner Bloom, are you inclined to excuse or recuse yourself?

COMMISSIONER BLOOM: No, Chairwoman, I am not inclined to recuse myself.

CHAIRPERSON BAILEY: I am not inclined to do -- what is your wonderful legal term, voir dire? So as Chairman of this Commission, I deny these motions. Do you have any objection to that?

COMMISSIONER BLOOM: No, I don't.

CHAIRPERSON BAILEY: Do you have any

objection to that?

COMMISSIONER BALCH: No objection.

CHAIRPERSON BAILEY: Then both of these motions are denied. The next thing on the agenda is to summarize the Oil Conservation Division rule on rule-making which discusses the conduct of hearings, the testimony and cross-examination, exhibits and transcript and deliberation decision and filing. Rule 19.15.3.12 is the specific rule --

MR. JANTZ: Excuse me. I'm sorry to interrupt. OGAP has another outstanding motion, a Motion to Take Administrative Notice of the Record in the Pit Rule.

CHAIRPERSON BAILEY: Which we will do after. It's on the agenda.

MR. JANTZ: Thank you.

CHAIRPERSON BAILEY: Not yet time to do that.

MR. JANTZ: I apologize. Thank you.

CHAIRPERSON BAILEY: The conduct of the hearings, the Rules of Civil Procedure do not apply. The Commission shall conduct the hearings and provide a reasonable opportunity for all persons to be heard without making the hearing unreasonably lengthy or cumbersome. The hearing will begin with

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a statement by the Commission Chairman identifying the subject matter and the procedures so we are following this rule. Unless ordered, both of the applicants shall present its case first. The Commission Chairman shall establish an order for other participants' testimony. We have sign-in sheets and we will allow persons to make brief closing statements.

The hearing I expect to continue for more than one day and we will provide an opportunity each day for public comment. In fact, we will provide opportunity twice each day for public comment. Once before lunch -- those persons of the public who wish to comment must sign in so that I have a list that I will go by before lunch -- and in the afternoon before we leave for the day.

Each person will be allowed five minutes and Theresa has a timer. So please observe the five-minute limit for public comment, each person.

We will continue this hearing as necessary each day and possibly beyond this week. All testimony will be taken under oath or affirmation. However, a person may make an unsworn position statement. We will admit relevant evidence and persons who testify are subject to cross-examination

by anyone who has filed a prehearing statement.

Exhibits will be allowed. They have been provided to the Commission and a transcript of the proceeding is being made. We will deliberate immediately in open session on the proposed amendments based on the motion that includes reasons for the decisions. Following the case, we will issue a written order and then it will be filed with the State Records Center and Archives that will publish the rule that is adopted. Are there questions concerning the process for rule-making? As I say, there are sign-in sheets at the back for any person who chooses to make sworn or unsworn testimony.

MS. FOSTER: Madam Chairwoman, just for the record because it actually cost me quite a bit of money, I just provided five copies as required by the rules for the public and they are in the black box there, so I want to make sure the public knows that IPANM as an applicant in this case did provide five copies as required by the rule. Thank you.

CHAIRPERSON BAILEY: Thank you. We will now take up the Motion to Take Administrative Notice of the Record in Oil Conservation Case No. 14015. Do I hear argument for this motion?

MR. JANTZ: Thank you, Madam Chair. OGAP would like the Commission to take administrative notice of the record in the Pit Rule Case 14015 and actually as an oral amendment to that, I would like to add the record for the chloride standards amendment, Case 14292. As the basis of the foundation for NMOGA's and IPANM's amendment to the Pit Rule, the information in that record, in both of those records, is imminently relevant to this case, and as you know, the rules governing the conduct of a rule-making are that all relevant evidence shall be considered by the Commission. And as a matter of equity, the Commission allowed OCD in the chloride amendment standard and IPANM to take administrative notice of the Pit Rule record in that case. OGAP asks the same courtesy in this case. Thank you.

CHAIRPERSON BAILEY: Is there a response?

MR. CARR: May it please the Commission, NMOGA opposes the incorporation of the prior record. As you are aware, Commissioner Bailey, it is approximately 8,000 pages. This is a new case. We are not here trying to decide whether or not we need a new Pit Rule. We are proposing amendments to the rule based on four years of experience with it, amendments we believe will make it easier to

understand, make compliance easier for operators, eliminate unnecessary burdens on operators and we also believe make the rule easier to administer and enforce. We believe we can do this without compromising the underlying standard which governs this proceeding and which is reasonable protection of freshwater and and protection of human health and the environment.

We have a new case. We also have a new commission. Only one of you heard the prior case. And back when we went into the second hearing and the record was incorporated from the first, every commissioner had been present to look at the witnesses, to hear the evidence, to cross-examine if they desired. Here two of you are new and you are asked to render a decision based on the record. If you incorporate it, that becomes part of the record you are looking to to reach a decision on our application, and if you do that, I think you should read it.

Also I would say that substituting 8,000 pages of a prior different case, wholesale bringing that into the record in this case is simply not a substitute for presenting evidence on the issues before you. During the prior appeals we had a very

difficult time. For over three years we couldn't get a court to rule on the prior Pit Rule, and I suspect it's partially because the burden on the Court was greatly compounded by an 8,000 page record. We think wholesale picking up these earlier records will make it more difficult for courts to review your decision in this case if that is required.

Prior record, prior sworn testimony can be used for cross. A witness can reference that and explain. But we think the proposal would create unwielding record, it is not like the prior incorporation of the earlier record and should not be allowed.

MS. FOSTER: Madam Chair, we support the statements made by NMOGA. We have nothing to add to that. Thank you.

CHAIRPERSON BAILEY: Ms. Gerholt, do you have a response?

MS. GERHOLT: Madam Chair, Commissioners, as OGAP previously stated, they did appeal part of the past commission's ruling of taking administrative notice. They set forth the standard, which is that all parties in advance need to be alerted of the specific facts proposed to take

notice of giving them an opportunity to object and to only take administrative notice of undisputed facts. The notice for these two cases did not state that the Commission would be taking administrative notice of any evidence from the prior hearings. So the first burden has not been met. However, if the Commission chooses to take administrative notice of the facts from the prior hearings, according to the standard it must only take notice of those facts which were not previously disputed. Nothing further.

CHAIRPERSON BAILEY: Mr. Bruce?

MR. BRUCE: Madam Chair, Nearburg supports NMOGA's position in this motion.

CHAIRPERSON BAILEY: Ms. Calman?

MS. CALMAN: We support OGAP's position.

CHAIRPERSON BAILEY: Mr. Dangler?

MR. DANGLER: I believe we support including the record, Madam Chair.

CHAIRPERSON BAILEY: Dr. Neeper?

MR. NEEPER: We support including the prior record because much of the science that was presented in the prior hearing would become very burdensome to the hearing if you went through all of those arguments again. And it would be very

convenient, I think, to the Commission if they could refer back to the prior record, use their judgment on whatever they found there. But that would be legitimate evidence for which they could then make their decisions.

CHAIRPERSON BAILEY: Mr. Fort?

MR. FORT: Jalapeno agrees with NMOGA and IPANM. I would further state that at this point OGAP chose not to include the prior record as part of the case-in-chief because it was not in the hearing.

CHAIRPERSON BAILEY: Mr. Smith, do you have legal guidance for the commission?

MR. SMITH: Well, I wish I did, but it's really discretionary, I think, subject to some of the comments that Ms. Gerholt made. You are not obligated either way to take official notice of the record.

CHAIRPERSON BAILEY: Then as Chairman of the Commission, I will deny the motion. The original Pit Rule hearing took place quite a few years ago and I am the only commissioner who was present at that time. The other two would have an obligation to read 7,000 pages and that is a burden that I'm not going to put on either commissioner.

In the intervening time period more evidence has been -- may have been developed, and given the foregoing, because of the scope of the changes that are requested and the scope of the original record, taking official notice of the original record is more likely to cause confusion than to render any benefit from this hearing. Is there an objection to that ruling?

COMMISSIONER BALCH: I do not object.

COMMISSIONER BLOOM: I'm sure I don't object, but -- I won't object but I did like Mr. Carr's statement that we will be able to reference the prior record and we can use the cross-examination. I think it is referenced throughout many of the presentations we will be hearing in the week ahead.

CHAIRPERSON BAILEY: But we will not take administrative notice of this record because this motion is denied. It is now time for opening statements and consolidating Cases 14784 and 14785. Mr. Carr, would you care to make an opening statement?

MR. CARR: Yes, I would. May it please the Commission, the New Mexico Oil and Gas Association appears before you today proposing

revisions to the Pit Rule. The current rule, as we know, was adopted on May 8, 2008. We have been living with this rule for approximately four years.

As I indicated a few minutes' ago, NMOGA is proposing revisions and modifications which we believe will make this rule easier to understand, thereby making compliance easier for operators. It will eliminate unnecessary burdens on operators. It will be easier to administer and we can do this without compromising reasonable protection of freshwater supplies or protection of human health and the environment.

There is an initial matter that requires clarification, because there appears to be a fundamental misunderstanding in the statements that have been filed. If we are going forward, I think we should at least start on the same page and I need to correct something. It goes to the subject matter of this application.

I want to talk about a problem that we had to deal with in 2008 and it has already reappeared. In the statement from State Land Office we heard again about 400 cases of significant groundwater contamination linked to E & P waste management pits. The evidence we will present will show that when

this statement was made, industry checked the OCD files for each of those 400 samples and 99 percent of these cases involved earthen production pits, not lined pits. This was a past practice. It is not permitted under current rules. And to cite that number for anything in this case only confuses and misstates the issues and it undermines this hearing.

The issue before you is not unlined earthen pits. The case before you involves changes in rules that govern temporary drilling pits and workover pits. And these are defined as pits which are constructed with the intent that the pit will hold liquids and will be closed in less than one year. These are temporary pits, closed in less than one year. They are permitted and operated under the rules we are going to be discussing and we are going to look at siting requirements, design requirements, construction requirements, all intended to ensure the integrity of these temporary pits.

Our evidence shows that they are constructed with 20 mill synthetic liners that have an average lifespan of 100 to 700 years, and at the end of the one year that they may be there, under your rules, they are removed, the soils are tested, the waste is removed. There is remediation, if

needed. The site is closed and the site is revegetated and that is what we are here to discuss with you today.

Permanent pits are not the issue. I think we do not intend to have anything we present or suggest be misunderstood as changing your rules and requirements as to these permanent pits.

There's another thing that I think must be clarified at the beginning, and it relates to changes that you will hear about concerning notice. We are doing nothing that would impact the Surface Owner Protection Act. That is a statute. This is a rule. We are proposing nothing intended to change or impact SOPA and all we are attempting to do on notice is conform particular notice requirements in the Pit Rule to the general release notification rules of the Oil Conservation Division.

The proposed revisions were developed by a NMOGA group that started working in early 2011 and the approach we took was to work from the current rule. And the first tab in our exhibit book shows the revisions we propose, including recent modifications proposed by us. When you look at what's behind Tab A it's going to appear that a great deal has been changed. But when you look at

what's behind Tab B, which is just the text, not the red line version, you will see not quite so much has been changed.

The reason for that is a very large section, and one of the simple sections to the closure section. When we tried to red line it, it simply didn't make any sense so we deleted it. Large portions of what was originally there has been moved to a couple of tables so we didn't have to repeat it over and over again. Some of the deleted material is inserted elsewhere. What resulted was the application we filed last year. We are moving towards a hearing, and the case was actually continued after modifications had been filed.

Since that time, we revised our original proposal. We incorporated many of the modifications proposed by the Oil Conservation Division. We made other changes in line with the State Rules Act and we submitted several weeks ago modifications to our original proposal which we, as the applicant, are permitted to do under the rules governing rule-making. That was filed on May 4.

Subsequently, as we go through this, we discovered there were a couple other things that we had not corrected or were inaccurate in our draft,

and last week we filed additional modifications that we marked for the purposes of this hearing as Exhibit 20. But these are minor and they will be addressed by individual witnesses when we get to those.

But I think it is important to remember that we are looking at temporary are pits, looking at workover pits. We are also going to be talking about multi-well fluid management pits which is a new type of temporary pit. We are looking at below-grade tanks. And though what we changes in certain respects how closely systems are regulated, it certainly does not remove closed-loop systems from regulation.

We will call seven witnesses. I need to explain the structure of our case. The first four witnesses are going to simply explain how we have proposed the rule be amended. They will go through various sections and say we have changed it. "Instead of this provision, we now refer to" -- that sort of stuff. After our first four witnesses that we hope we can get through today, we are then going to call three experts who are going to go back through and provide the kind of scientific risk-based analysis to support these numbers that

the Commissioner of Public Lands and others are looking for.

So that's how we are going to structure our presentation. The first witness is Bruce Gantner, environmental engineer. He is going to look at the siting criteria. We will discuss with you a two risk-based threshold approach to siding. One, which is probably more applicable in the northwest part of the state where you are drilling with water; and then another that would be applicable elsewhere.

He is then going to talk about increased cost to operators from compliance with current rules, and then he's going to look at the closure statements and he is going to show how we have attempted to simply and clarify the rule with tables that set out numerical standards that apply; one table if waste is to be removed for off-site disposal and the other that contains standards that apply if disposal is on or near the well site. As part of that, he is going to discuss standards for on-site closure and trench burial.

Our second witness will be Ed Hasely. He is an environmental engineer with Energen and he is going to review with you our proposed changes to the

provisions governing below-grade tanks. He is going to explain the purpose of these tanks. He is going to propose that they be registered with the Division instead of permanently getting around what appears to have been a log jam in the processing of these applications. He is going to review the changes to siding design, construction and to the operational requirements and he is going to show you that what we propose eliminates redundant language, and we again incorporate tables instead of repeating standards throughout the rule.

Our third witness is Myke Lane, environmental health and safety specialist. He is going to talk about multi-well fluid management pits. He is going to explain their primary purpose and the benefits they provide to operators and to the environment. It's important to note that these pits are not for waste. They serve as storage facilities for the use and the recycling of fluids during the completion process for multiple wells. He is going to explain how NMOGA proposes these pits be regulated and will look at permanent siding design, operational closure and reclamation requirements.

Our fourth witness will be Jerry Fanning,

the environmental coordinator for Yates. Jerry has drawn the short straw. He is sort of the cleanup here. We have looked at particular areas, siding, closure, below-grade tanks, multi-well fluid pits, and now there are a number of not unimportant but smaller changes in the rule. We will go through those with you to explain what we are proposing and he is going to explain new variance and exception provisions which we think are critical to an effective program to regulate pits in New Mexico.

Then we will move to our expert witnesses. We have three. Our first -- they are going to look at the closure standards and the reclamation requirements. Our first is Dr. Ben Thomas. He is a toxicologist. He testified here before. He is going to talk about -- provide a risk assessment for the standards in NMOGA's proposal. His testimony is going to address possible public health impacts and associated environmental impacts of the proposed rule revisions. He is going to show how the proposed changes will afford reasonable protection to public health, the environment, and how it will allow operators to more efficiently and economically produce oil and gas in New Mexico.

We then go to Dan Arthur. He will testify

about the standards in the rule, show how they are protective, more extensive than that in other jurisdictions.

Finally, we will have Bruce Buchanan testify about remediation and reclamation. His testimony will include a discussion on salt migration associated with the operation and use of temporary pits, below-grade tanks and some of the facilities, and he is going to provide a description of the essential elements of land reclamation technology.

At the end, we think we will have shown you how this rule can be changed to make it work better than it is today for you and for us and how we can do this in a way that is protecting human health, the environment and provides reasonable protection to freshwater.

CHAIRPERSON BAILEY: Mr. Carr and all parties who have submitted amendments or changes to their proposed amendments, please point out exactly which parts of the proposal were submitted after notice of the May 14th hearing was published.

MR. CARR: Madam Chairman, we will do that, and I think it will be appropriate to do that as we move through the case because it makes it

understandable if we do it that way. I would also like the record to reflect that NMOGA provided additional copies of its exhibit book to the public.

CHAIRPERSON BAILEY: Ms. Foster, would you like to make an opening now or reserve it for your case?

MS. FOSTER: Which would you prefer?

CHAIRPERSON BAILEY: To reserve it.

MS. FOSTER: I will reserve it.

CHAIRPERSON BAILEY: Mr. Jantz, would you like to make an opening statement now or reserve it for your case?

MR. JANTZ: I would like to make it right now, Madam Commissioner, and I will be brief. The Commission's decision in this rule-making should be guided by two principles. One, change. And we are going to hear a lot of evidence during this next week but I think what the Commission needs to keep in mind is that you can't reconsider the Pit Rule.

Let's make no mistake. This is really about the Pit Rule. This is not a new case. It has a new case number but the fact of the matter is this is essentially reconsidering the Pit Rule that was passed in 2008. In order to reconsider that Pit Rule, the Commission can't make changes unless

there's a rational basis for it. In other words, something has to have changed since 2008. In this case we are looking at virtually the same evidence from industry as we did in 2008. That hasn't changed. What has changed is that the pit contamination incidents are down from over 400 prior to the Pit Rule to zero now. And second, rig counts are up to 2007 levels indicating that the Pit Rule really hasn't had an effect on the economics of the oil and gas industry in this state. Those are the two things that have changed.

The second thing that the Commission will want to keep in mind during the course of the proceeding is risk. Like 2008, like you did in 2008, like the Commission did in 2008, you will hear a lot about risk-based analysis. But I think you would like to consider who bears the risk. What essentially the Commission will be considering is who is going to bear the risk of damage to public health, businesses, private surface property, public trust lands and water, both ground and surface water.

Once again, as it did in 2008, the industry is asking you to socialize the risk associated with the oil and gas production and

privatize the benefits. That being the case, OGAP respectfully asks that you keep the Pit Rule intact as it is. Thank you.

CHAIRPERSON BAILEY: Mr. Bruce, do you have an opening?

MR. BRUCE: I do not, Madam Chair.

CHAIRPERSON BAILEY: Ms. Calman?

MS. CALMAN: Commissioners, I think I would just like to note that EMNRD and the other groups you are representing are only planning on providing testimony and argument in the second portion.

CHAIRPERSON BAILEY: Mr. Dangler?

MR. DANGLER: We are hear to listen, Madam Chair.

CHAIRPERSON BAILEY: Dr. Neeper?

MR. NEEPER: We will have a very brief statement. We will present testimony along two lines. One is that the proposed amendments to the rule provide significantly less protection for the environment. The second thrust of this testimony will be to effect that there are numerous instances in the proposed rule where the wording is arguable or potentially misleading, giving the appearance of protection or regulation when, in fact, it could be

argued that such regulation doesn't exist or the operator could escape the rule with a simple argument. And we feel that the structure of regulation should not have weasel words and various little hidden escape clauses, and we will argue to that effect.

CHAIRPERSON BAILEY: Ms. Gerholt?

MS. GERHOLT: Madam Chair, the Division will reserve its opening argument before it presents its case-in-chief.

CHAIRPERSON BAILEY: Mr. Fort?

MR. FORT: Jalapeno Corporation does not have an opening statement. Thank you.

CHAIRPERSON BAILEY: Would you like to call your first witness?

MR. CARR: May it please the Commission, at this time NMOGA calls Bruce Gantner.

BRUCE GANTNER

after having been first duly sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. CARR

Q. Would you state your name for the record, please?

A. My name is Bruce Alan Gantner.

Q. Mr. Gantner where do you reside?
A. I reside in Farmington, New Mexico.
Q. By whom are you employed?
A. I'm currently employed by ConocoPhillips Company.
Q. What is your position with ConocoPhillips?
A. I'm an environmental consultant.
Q. Could you describe for the Commission what an environmental consultant does.
A. Over the years I have had different positions, but my current position, I provide technical consultation on environmental matters that have to deal with air, water, waste and all of the environmental disciplines.
Q. Have you previously testified before the New Mexico Oil Conservation Division?
A. Yes, I have.
Q. Have the commissioners changed since your last testimony?
A. Yes, they have.
Q. Could you summarize your educational background please?
A. I have a Bachelor of Science in mechanical engineering from Kettering University, used to be called General Motors Institute, and a Master of

Science in Environmental Engineering from the University of North Carolina at Chapel Hill.

Q. Could you review your work experience?

A. I worked for General Motors as a plant facilities engineer for three years. I worked in the state of North Carolina for three years as an environmental engineer; five and a half years with Cameron Ironworks now called Cameron International as a manager of environmental health and safety; eight years with a solid waste firm called Browning-Ferris Industries. My last position there was divisional vice president of Environmental and Compliance; and then 18 years with ConocoPhillips and its subsidiaries in Environmental, Science and Safety as well.

Q. At the time of your prior testimony before the Oil Conservation Division, were your qualifications as an expert accepted and made a matter of record?

A. Yes, they were.

Q. How were you qualified at that time?

A. I was qualified as an expert in environmental engineering.

Q. Is a copy of your resume included in the NMOGA exhibit book behind Tab 2 and marked NMOGA

Exhibit No. 2?

A. Yes, it is.

Q. And does this exhibit identify the various positions you have held with Conoco?

A. Yes, it has.

Q. Does it also identify the various environmental task forces that you have worked on?

A. Yes, it does. I will say that the resume probably -- I haven't looked at it, but it may not reflect the most current position of environmental consultant. Immediately when we filed I was an environmental supervisor. Now I serve as consultant. I'm not sure that was updated.

Q. Were you a member of the NMOGA committees that developed the proposed amendments to the Pit Rule?

A. Yes, I was.

Q. When did you first start working on the Pit Rule?

A. Well, the original rule that I worked on with NMOGA was with the original Rule 50. Since then, obviously, in December of 2010 we formed a group at the beginning of review in recommending amendments. I developed the first red line draft and then the committee, both NMOGA and IPANM

members, met as well to address some additional concerns about the rule and then we prepared a draft that was filed last fall, and then since that time we continued to work with the Pit Rule group to recommend additional revisions which, as you commented, are in the submittal.

Q. Have you prepared exhibits for presentation today?

A. Yes, I have.

Q. And are they in the form of PowerPoint slides?

A. Yes, they are.

Q. Are hard copies also available in the NMOGA exhibit book?

A. Yes, I believe they are.

Q. Are you prepared to review this information with the Oil Conservation Division?

A. Yes, I am.

MR. CARR: We tender Mr. Gantner as an expert in environmental.

CHAIRPERSON BAILEY: He is so accepted.

Q. Mr. Gantner what does NMOGA seek with this application?

A. Well, we have lived with the rule for four years, so in my words, we are not trying to just

abolish the rule. We wanted to find those elements of the rule that were causing the most difficulty, that added unnecessary cost without any additional protection, and to make them also simpler to understand and comply.

I think everyone knows, reading through that rule, it was pretty tenuous when you had to go through and try to find what sections you needed to comply with. So we are seeking revisions more easily understood but in all cases with the intention that it's still protective of groundwater, protective of public health and the environment.

Q. Mr. Gantner, is the material behind Tab 1 in NMOGA's exhibit book the proposed revisions and modifications NMOGA is advancing for the Pit Rule?

A. Yes, it is.

Q. We have two formats behind Tab 1?

A. Yes, I believe there's a red line version that shows the changes to the original version and then there's one that shows it without those red line changes.

MR. CARR: I have copies, may it please the Chair, of the more recent modifications that have been marked NMOGA Exhibit 20. With your permission I will pass those out and we will refer

to them. This will provide the text.

CHAIRPERSON BAILEY: Mr. Carr, if you would please refer to the original application, Modification No. 1, Modification No. 2 and whatever subsequent modification so we can be very clear on the record as to which modification and then relate it back to the original application.

MR. CARR: We will try to do that. It may be a little confusing but I think we can.

CHAIRPERSON BAILEY: Thank you.

MR. CARR: May it please the Commission, we should note that we are not relying on the original application at all, just the revisions filed on the 14th which would supersede that.

CHAIRPERSON BAILEY: Yes, but we had notice given of the first application.

MR. CARR: That's fine.

Q (By Mr. Carr) Mr. Gantner, could you review for the Commission the portions of the NMOGA proposal that you will discuss in your testimony?

A. Okay. The two principal areas I'm going to testify about have to do with siting criteria and then the second has to do with the section called closure and reclamation. I am strictly going to talk about the closure aspects. The reclamation

will be addressed by someone else.

Q. In the Land Commissioner's prehearing statement they addressed 400 cases of significant groundwater contamination that could be linked to E & P wastewater practices and they cited 2007 OCD sampling program. Have you examined those numbers or been involved in doing that?

A. I certainly didn't examine all 400, but I know I was part of a group that went in and looked at the files within the Oil Conservation Division and by and large, as you stated earlier, they were earthen unlined production pits that were perfectly within the rules at the time but had caused legacy contamination under the years. So those are not the temporary pits for drilling workover completions and multi-use fluid pits that we are talking about today. So those pits that were the result of that kind of contamination aren't allowed under this present rule.

Q. Do the amendments NMOGA is proposing change the requirements for permanent pits?

A. No. We left permanent pits alone.

Q. Mr. Gantner, are you going to review the technical aspects of this proposal? What is your testimony going to focus on?

A. No, I will not be reviewing the technical aspects. We have experts that you mentioned, Dr. Ben Thomas, Dan Arthur, Bruce Buchanan who will address the technical aspects. I will review basically how we have lived with these rules and how we are proposing changes and I'm going to elaborate on those changes but not the technical aspects.

Q. Let's go to your PowerPoint presentation. Let's go to siding and start with NMOGA Exhibit No. 3-2.

A. Okay.

Q. I would ask you to provide an overview of what we are proposing.

A. Okay. First of all, with respect to pits, one of the things that we have said all along is that one size does not fit all and the previous rule was exactly that. It put all pits into the same category, no matter if you used water based drilling mud or brine-typed muds. So we have a risk-based criteria that supports two thresholds in siding for pits which we will cover later. Then below-grade tanks, again, that's going to be addressed by Ed Hasely but again it's a risk-based criteria supporting reduced siting restrictions which are essentially tanks out in our locations.

Q. Since we are talking primarily or principally about temporary pits, could you refer to NMOGA Exhibit 3-3 and review the changes that are proposed to the definition of temporary pits?

A. Is that the one you just handed out?

Q. No, that would be Slide 3.3.

A. Okay. The definition -- again, part of making changes and proposed changes to this rule, we had to change definitions as well. So a temporary pit as read there means a pit, including a drilling or workover pit, which is constructed with the intent that the pit will hold liquids and be closed in less than one year. "Temporary pits may be used" -- there's a typo -- "one or more wells and located either on-site or off-site of a drilling location." That was critical, that these pits did not have to be within -- right on that location. You could have a pit nearby and use it for disposal.

"Any freshwater containment structure such as a pond, pit or impoundment is not a temporary pit." The reason we added that language is in certain of the districts, they were interpreting if you had a freshwater pit, that that was covered under the Pit Rule. In our minds that's no different from the pit or impoundment you use for

storing freshwater. And as long as it only had fresh water, there was no reason why that should be subject to the Pit Rule.

Q. Let's move to slide No. 3-4. Would you identify and review that, please.

A. Okay. We are talking now about siting, temporary pit siting. Water -- again, to draw this distinction that one class doesn't fit all we said that water-based drilling muds were addressed by adding a low chlorides drilling fluids to the definition. And at first we didn't have a number. We just said low chlorides. Then we began looking for numbers. We came up with 15,000 milligrams per liter threshold for low chloride drilling fluids.

Q. Now, this distinction will accommodate water-based fluids in the San Juan Basin and that's what it's intended to do?

A. That's correct. It would distinguish the difference between brine-type muds and low -- water-based drilling fluids.

Q. NMOGA is not proposing changes where other types of drilling fluids are used? It would precede that line of demarcation?

A. I don't believe so.

Q. And the 15,000 to one number was in the

original proposal that was advertised and filed last year; is that correct?

A. By NMOGA. Yes, it was.

Q. Could you refer to Exhibit 3-5 and explain this 15,000 to one milligrams per liter?

A. I will be glad to. We came up with the definition that low chloride fluids means fluids that contain less than 15,000 milligrams per liter of chlorides determined either by analysis or process knowledge.

We looked at various states. Texas has a definition for low chlorides and it is set at 3,000. But it's strictly for how you dispose of the materials. They say if you are less than 3,000 milligrams per liter or kilogram of chlorides, then you can land-spread it. You can land-spread those cuttings. If it's above that, you have to dispose in place. But they don't prohibit a pit based on chlorides, the low chloride number.

Colorado had something more to the thinking that we were. They said that if you had low chloride fluids, and they defined it at 15,000, you didn't need to get a permit from the Commission. You could go ahead and have a pit without a permit. Above that threshold they said you had to have a

permit for that level. So 15,000 seemed very reasonable on that.

The other thing was we used on occasions a material called KCL and water which is usually a 2 percent solution for drilling. Occasionally you need that to control the well. And that would fall just below that 15,000 number. I think if you ran the math, the chloride comes to about 12- or 13,000.

CHAIRPERSON BAILEY: We have a request. We don't know whether these changes are pre-notice or post-notice. Let's assume the original proposal and then you tell us where the changes are made.

MR. CARR: I don't have -- what we did, Madam Chairman, is we assumed once we had proposed modifications they superseded what we had proposed so we presented those. I don't even have with me the original proposal. I do know the basic elements that were in the original proposal, but it's going to be difficult to structure the presentation here as we go forward that way.

CHAIRPERSON BAILEY: Please try your best.

MR. CARR: I will try my best.

CHAIRPERSON BAILEY: Tell us if this is Modification 1 or Modification 2.

MR. CARR: I think what we can do is point

out things that have not been changed by modification that would be from the original noticed provisions, okay? We will try to do that.

CHAIRPERSON BAILEY: Thank you. We just don't want to run afoul of the notice requirements.

Q (By Mr. Carr) Mr. Gantner, let's go to NMOGA Exhibit 3-6 entitled Temporary and Multi-well Fluid Management Pits, Siting Changes in Siting Criteria. Are the numbers on this table the same numbers that were originally presented with the application last year?

A. I believe they were.

Q. Would you review the table for the Commission.

A. Okay. Again, given that we have now established a two-tiered approach for temporary pits, those that will be handle low chloride drilling fluids, we said that the groundwater should be no less than 25 feet. In other words, you should have at least 25 feet between the bottom of the waste and the groundwater, to a watercourse would be 100 feet, and a residence 300 and so on and so forth. Now, those are relaxed from what the current rule has which is the line at the bottom, which was the one-size-fits-all approach that said everything

had to be that.

Then the other category would be other fluids other than low chlorides. They, you see, have to have a minimum of 50 feet of groundwater, 300 feet to watercourse and so forth. So there were changes made particularly to the last two to a water well and to a wetland, but by and large they stayed the same.

Q. And a subsequent witness will discuss these in terms of the risk?

A. That's correct, the experts will address that.

Q. Can you explain for the Commission the reasoning behind these requested changes in the siting requirements?

A. Well, again, we wanted to take a risk-based approach. These siting requirements are very important. They affect two things. Number one, they affect certainly where you can have a pit with a liner or you must choose the closed-loop system. The other thing which was very important, which really added some cost, again without meaning in our minds, was that you couldn't even dispose into these environments. You had to -- irrespective of what the constituents met, you had to haul the

cuttings to the third-party place as opposed to leaving them in place for disposal.

Q. Mr. Gantner, State Land Office in its statement stated that the standards basically should be the same as those in the New Mexico Solid Waste Act and for OCD waste disposal facilities. Are these setbacks different from those?

A. Well, I think the setbacks that they have for a permanent disposal facility are probably in the line of what the current rule has. But that's for waste that you are bringing in waste from multiple sites, you're going to dispose it there permanently, you are going to have groundwater monitoring. That is a different basis than a temporary pit that's there for a period to drill a well. You are going to dewater it. If you have the constituents pass, then they will be disposed.

To me it's apples and oranges. You have a long-term multi-volumes of waste being brought to a facility. Siting should be different for that than a temporary fit that you are going to use for a period of time and then properly close it.

Q. Before we move on, I think we need to address a couple of definitions, a couple of terms that we have been proposing new definitions to. I

would like you to refer to Exhibit No. 3-7 and just explain why you have proposed changes in definitions to continuously flowing watercourse and also to significant watercourse.

A. Continuously flowing watercourse as read there means to me a common sense definition that we would all think of continuously flowing. It means a stream or creek that's named or delineated by a solid blue map on a quadrangle map having a certain scale factor. It typically has water flowing during the majority of days during the year. It doesn't include ephemeral washes, arroyos and similar depressions that don't have flowing water during the majority of days of the year.

The reason this became a problem is because, again, in various district offices, they were taking any real or any kind of surface depression, whether it be a wash or a dry wash that never saw water. You know, if you were out there 365 days a year, it might have water two or three days a year, and then you couldn't have a pit within a distance of that. It made no sense. So that was part of that change.

Then a significant watercourse, there probably wasn't much change but it means a

watercourse with a defined bed, and basically you have a defined bed and bank of such a watercourse and then the next order tributary to that.

So these were just workable changes that we felt would give greater flexibility, be clearer to both regulator and the industry, but yet still be protective of groundwater, surface water and public health and the environment.

Q. Let's go to NMOGA's Slide No. 3-8, below-grade tank siting. Are these numbers numbers that were in the original proposal as advertised last year?

A. Yes. I will just go through this briefly. Ed Hasely is really going to cover this in more depth. Again, these are tanks and we need to think of these as tanks. Whereas the current rule said that you had to be 50 feet from groundwater, we said a more reasonable number is to have the tank as long as there is at least ten feet of groundwater. So this area here from the current rule, we will show later, caused a lot of cost differences that we had to bear, particularly up in the northwest when you couldn't use a below-grade tank. But these are the proposed distances.

Again, risk-based, they are tanks, they

have integrity. No reason why they shouldn't have a closed proximity.

Q. So what you are proposing, what NMOGA is proposing, is more flexibility for these tanks in regard to a watercourse?

A. That's correct.

Q. We will have another witness that will address the risk associated with the change or the lack thereof?

A. That's correct.

Q. How do the proposed changes in siting requirements impact closed-loop systems?

A. Well, closed-loop systems are still allowed. We aren't restricting them. What we are saying is if we change the siting criteria, say, from the previous slide that we saw the table, that we are saying you would not have to use the closed-loop system as long as you stay outside the siting boundaries. So basically you would have to use it less often when it's not necessary to be protective. You still might operationally choose to use it for other reasons, but there's nothing in this rule that would prohibit the use of closed-loop systems.

Q. Why are siting criteria for below-grade

tanks important to operators?

A. Well, again, with the current rule, I know from my company itself, we had to -- we could not use below-grade tanks for several of those definitions and it just made no sense. And we had to add costs unnecessarily.

Q. Let's go to Slide 3-9 and ask you to review the information.

A. Okay. Well, our experience, again, for the four years is that we had to incur an additional 50- to $70,000 per location when you couldn't use a below-grade tank. You may say how can that happen? The fact that you go below-grade, above-grade, why does that change? Well, up in the basin of the northwest San Juan, very mature -- pressures are lower. We have to gravity-drain a lot of our equipment from separators to tanks, when we are swabbing, that we have to gravity-drain those fluids. That's the way it's been done and it's been done very well.

When you can't gravity-drain because you can't put a below-grade tank, you now have to bring the tank above-grade so everything else, we have to build up that location. So we had to build up basically like little risers for all the tanks. We

had to build up risers for the compressors and all that. Our experience is it cost us 50- to $70,000 to do that. Again, without, to us, any additional benefit or protecting the public health and the environment.

Then on the siting side as well where you had these distances that said you could not bury waste, no matter how clean the cuttings became, if you were within those siting distances you had to haul the material. So we are talking sometimes 100 plus miles that we had to haul these cuttings to a third-party site which ranged anywhere from 100- to $150,000 per location.

Q. Let's go to the next slide and I would ask you to review other costs ConocoPhillips has been incurring.

A. Closed-loop systems, we have been using these for ConocoPhillips now from 2010 to the present. I pulled that data so I could present here. It's 19 percent of our wells in the San Juan Basin were drilled that way so that came to 47 wells. Based on those 47 wells, the average increased cost was about $105,000 per well.

Now, again, some of the wells, even with the criteria we have asked for, would still need to

be done closed-loop. That's fine, because those distances would certainly merit the added protection. But in many cases there wasn't in our minds any added protection to the public health or the environment. So when you incur those kinds of costs, that means that you are able to drill less wells with your capital budget.

Q. If you are able to drill less wells because of the additional costs, does that necessarily mean the wells are going to be drilled in the future?

A. Well, it could be or it could not. I mean, A company like ConocoPhillips much like other companies, you have X amount of capital for the whole company. They are going to invest capital where they get the greatest return. If they see that they could drill the wells that they can get a better return in other states and other jurisdictions that don't have the restrictions, that's certainly going to be their inclination to do that.

Q. Does the Pit Rule, in your opinion, tend to reduce the number of wells?

A. Well, absolutely. It has in our case. Again, for San Juan, certainly economics, the

current gas prices have by far the greatest effect. Then the other costs by and large take away from your budget so you are able to do less wells with your budgets.

Q. Does the use of the closed-loop system result in lower later cleanup costs for ConocoPhillips?

A. Well, again, where you had siting restrictions that said absolutely you couldn't dispose of the material, they didn't result in any lower cost for disposal of cuttings. Now, if the Commission does approve the siting changes we have asked for, then closed-loop would certainly in some cases allow us to dispose of those cuttings in place. But by itself it doesn't affect the cost of disposal.

Q. Let's talk about closure --

CHAIRPERSON BAILEY: Before we start the second part of your testimony, let's take a ten-minute break.

(Note: The hearing stood in recess at 10:31 to 10:42.)

CHAIRPERSON BAILEY: Back on the record. Mr. Carr, Mr. Gantner was giving his testimony.

Q (By Mr. Carr) Mr. Gantner, before we go to

closure, I want to ask you a question about the Surface Owner Protection Act that relates to siding. Are you familiar with SOPA?

A. Yes, I am.

Q. You have a landowner, private land. Is it possible under SOPA for that individual landowner to work with the oil company and negotiate for additional, perhaps more restrictive, siting requirements?

A. Absolutely. What we set here is what the rules will allow from a state regulatory perspective. When you are talking about with the private surface owner and their property, they can certainly stipulate that differently and you will negotiate with them to arrive at a surface use agreement.

Q. So the recommendations are not intended to in any way override the rights of a private landowner under SOPA?

A. They do not.

Q. Let's go to knowing Exhibit 3-11, closure. This is an initial overview in regard to the closure provisions. This is consistent with what was originally filed, is it not?

A. Yes, it is.

Q. Why don't we go to this and I have asked you to review the information on the slide.

A. This section itself, the actual title of 19.15.17.13 says "Closure and Reclamation" but we left that off because I'm not going to talk about that. But this section of the current Pit Rule was really cumbersome. Andrew Hoff with BP and I, we worked on this for a whole day trying to improve the clarity and reduce the redundancy of the section, and we did so from taking it from six pages to three.

Part of what accomplished that was incorporating tables, and so with the closure we improved the clarity, established scientifically supportable thresholds and then, again, tables allowed for us to reduce a good bit of redundant text.

Q. And the tables that are in the draft before the Commission are the same tables that were proposed initially? The numbers are the same?

A. I believe that's correct.

Q. Now, to be sure we address the modification issue the best we can, modifications to what NMOGA is proposing have also been proposed by the Oil Conservation Division; is that correct?

A. That's correct.

Q. And have you reviewed what was proposed by the Oil Conservation Division?

A. Yes, I did.

Q. Would you comment on that?

A. Well, in terms of closure, it looked like they just kind of struck it out and rewrote it. Basically from what I saw -- I mean, I didn't give it real thorough examination, but it looked essentially the same as what we had so I didn't see any objections to the change. It met the intent of improved clarity and redundancy but they reworded it.

Q. Go to NMOGA Exhibit 3-12. What does this show?

A. We divided closure into two parts. We said first if you are going to haul waste off to a third party, then this should be the section you go to. Instead of having to go through four or five sections you go to one section. So if you're going to haul your waste to a third party either by your own choice or because you couldn't meet the parameters, you are going to excavate contents in the liner and haul course. Before that you will pull the fluids. Then you will excavate the

contents and then you have to test the soils beneath the liner to see if you have evidence of the release. That's what the current rule requires.

Now we have a table which, again, reflects the revised threshold of testing soil. If any of those constituents show that you have a release, meaning you are above those standards, then you will have to discuss further steps with the OCD. If no release you close, recontour and revegetate with vegetation.

Q. This is if you are going to be taking the waste off-site?

A. That's correct.

Q. Let's go to the next slide and look at what happens if you are proposing to dispose in either a pit or burial trench nearby.

A. In our case, in our history, this should be most cases, at least up in the northwest. I think probably true in the southeast too, where you are going to allow the waste to be disposed in place or in a nearby trench. Again, you remove the liquids, you stabilize or solidify the contents. Three to one max, which the current rule called for. You test the contents, and then Table 2 now, you go to to see the revised thresholds, again, which

Dr. Thomas and others will testify on their relevance. If the contents fail, then you have to haul the contents and go back to the element in the previous slide of how you pull the liner and test beneath the soil.

Q. Let's continue.

A. Assuming the contents pass, then you use either the temporary pit that you constructed, or again, this could be where you had a drying pad with a closed-loop system and you could construct and do earthen trench with a liner. The one difference we eliminated is they had an arbitrary thing in the previous rule that said you had to be within 100 feet of the well that you drilled. This took away opportunities to have a nearby location that you could have a pad and use it for two pits. So really, it didn't make sense. So we took that restriction out.

Further stabilize and solidify as needed, and now you cover with four feet of compacted soil. For the trench, we took out the requirement that you have a liner because it's really not necessary, and then reclaim the location per the site reclamation criteria.

Q. Now, the numbers in Tables 1 and 2 will be

reviewed by other witnesses?

A. Right.

Q. The removal of the trench liner will be discussed by a subsequent witness; is that correct?

A. I believe that's correct.

Q. Basically what was the reasoning behind the removal of that cap?

A. You commonly see where you have a liner, a cap liner like this over a landfill. What you are trying to do in a landfill is avoid leachate formation. You have all sorts of waste materials you have accumulated.

In our case, again, you are talking a single well, single pit with the contents that you dewatered, and now you are going to put four feet of soil. I think the experts will show that you don't need a synthetic liner to prevent salts from migrating or anything else. So this is protective.

Q. In its statement, the State Land Office expressed concern about off-site burial trenches and noted that when waste can be disposed of in another well location it's difficult to know or impossible to know whose waste is in the trench or pit. Is that correct?

A. That's not to my recollection. Any permit

that you do when you drill the well, you have to disclose where the contents are going. It's either going to off-site, which you then have a manifest with it, or you wrote in your plan where it's going to go. So from the passage of this rule, you will have a tracking of all waste from a well site to drilling completion.

Q. These procedures that you have been discussing here are the exact procedures that were set forth in the original filing?

A. Yes.

Q. Let's go to NMOGA Exhibit 3-15. Would you review this, please.

A. Okay. In the current rule it allowed for some alternate closure requirements. We just simplified this to say again, very clearly, that technology is always evolving so new things are coming along. So if you have an alternate closure requirement, you may propose -- apply to the district for the closure method and the district, based upon their review, if they show it's protective of groundwater, surface water, public health, welfare and environment then they will approve it. It clearly states where that approval comes from and that's why it's there.

Q. Let's go to the next slide and I would ask you to discuss closure and notice reporting.

A. Okay. Again, for the temporary pits, again, 72 hours to the district office, and that's the same for the multi-fluid well management pit and then a below-grade tank. The permanent pit, again, we left untouched so that is the same as what the current rule requires. It's 60-day notice to the Santa Fe Environmental Bureau before commencing closure.

Q. But the others are reported to the district?

A. The others are reported to the district. That's right.

Q. In its prehearing statement, State Land Office expressed concern about extending the lives of temporary pits with our proposal; is that correct?

A. I think what I recall is they were objecting to extending it from six months to a year. And again, if you look at other states, Wyoming, for example, they allow up to a year. From our experience, yes, you can generally do it within six months, but there are occasions when you need additional time, and rather than burdening the State

with frequent requests for alternate closer, we felt a year as the base should be the case and then that way avoid that obstacle. That's been my experience and that's why we did it.

Q. Let's go to the next line. Timing Requirements for Closure.

A. Yes, again, timing, again, same timing as in the current rule. It clarifies that operator shall note date on the C 103 or C 105. Again, just adding clarity on how that notification is to be made. Then the multi-well fluid management pit, closure within six months. That's a new category, so we left that at six months or set that at six months.

Q. Under the current proposal, under the most recent proposal, is an operator still required to close permanent temporary pits within six months after the date the operator releases the rule?

A. Are you talking about the current rule or our proposal?

Q. I'm talking about what is being proposed.

A. Our proposal, I believe, for temporary pits is to allow for up to a year. Others are six months.

Q. Let's go to Exhibit No. 3-18. Timing

Requirements for Closure Continued.

A. Ed Hasely may cover this as well. But again, for below-grade tanks we said that for closure to eliminate -- right now there's a deadline in five years and that comes up with 2013. Irrespective of whether tanks have integrity they are required to close if they don't meet the design criteria. We changed that. We said if you have integrity and can demonstrate it, you can continue to use them. Only when they fail to meet it are you required to upgrade. And then the same for sale or transfer, not meeting. So basically --

Q. So now you don't have to close a below-grade tank upon sale or transfer of the property?

A. Which under the current rule you would.

Q. So as long as the below-grade tank continues to demonstrate integrity, you may use it?

A. That's what this says.

Q. Before we wrap up, there are a couple additional terms I would like you to address. I would like to go to slide 3-19, which is the definition of visible. Could you explain, one, the definition, and how we got there?

A. Okay. This comes up when you need to

remove oil that's on a pit. If you are out there drilling or completing a well and oil from some source happens to show up on the pit, the current rule says you need to remove any visible amount on the surface. Our definition says when used with respect to oil on the surface of a pit it means a sheen that occupies 30 percent or more.

We had some discussions with at the time Director Fesmire and others to come up with interpretations of what this meant. And the difficulty you have is you could have a sheen that occupies one square foot on a pit which doesn't cause a problem. It's not a problem to wildlife, cattle. It's not causing a problem. But when it gets to be more than de minimis amount, then you need to do something. So this is one we had discussed with them. Again, not that we got it, but this is one we discussed.

So that seems reasonable to us. When you are talking about a sheen, not a measurable but a sheen on a pit, you want to avoid having to react to little de minimus sheens on a pit. So that is why we proposed this 30 percent or more.

Q. Let's go to the definition of a floodplain, which is our last slide.

A. Okay.

Q. Why did we propose this?

A. The reason we proposed it is there are different interpretations in different districts of what a floodplain was so we wanted to be very clear and specific that it's a U.S. Army Corps of Engineers or FEMA-documented 100-year floodplain. If they have documented it, that's one that applies. If it's not documented just because it's in a low lying area, if it doesn't meet this definition, it's not.

Q. Mr. Gantner, will adoption of the proposed amendments eliminate rules that tend to reduce the total oil and gas produced in New Mexico?

A. Well, what we have proposed will eliminate waste; in other words, we are able to drill more wells within the state.

Q. Does anything in the rules cause waste of oil and gas?

A. No.

Q. Will any of the proposed changes impair correlative rights?

A. No.

Q. Based on your training and your experience as an engineer, if these amendments recommended by

NMOGA are adopted, will the rule remain reasonably protective of freshwater and protective of human health and the environment?

A. Given my 30 years of experience in the environmental field, I feel they would.

Q. I hate to ask this because I am advocating getting rid of redundancy, but will you have other experts who will explain the standards related to the risk they do or not pose?

A. Yes, there are other experts and witnesses who will present the other factors who will further support the case with me.

Q. Will adoption of the amendments remove unnecessary impediments to operators trying to develop New Mexico resources?

A. It will reduce certainly a number. It doesn't reduce all, but it reduces those that cause the most difficulty.

Q. Now, Mr. Gantner, I would like you to, before we conclude, go to Tab 5 in your exhibit book and behind that tab is a photograph that's marked NMOGA Exhibit 5.1. Could you identify that for me?

A. Yes. That is a below-grade tank that -- one of many that ConocoPhillips uses and I have provided that and you will see that in later

testimony from Mr. Hasely. But that is one that I provided for him to use.

Q. This is a true and accurate picture of one from ConocoPhillips's files?

A. That's correct.

Q. What about the document behind that marked 5-2?

A. That's an engineering drawing that shows basically how a below-grade tank interfaces with other equipment and how it is used to collect fluids.

Q. Do you testify to the accuracy of the photo and the diagram?

A. Yes, I do.

Q. Were NMOGA Exhibits 2 and 3 prepared by you?

A. Yes.

MR. CARR: May it please the Commission, at this time I move the admission of NMOGA Exhibits 2 and 3 for Mr. Gantner's presentation and two slides that he has laid the foundation for that will be used by another witness, 5-1 and 5-2.

CHAIRPERSON BAILEY: Any objections.

MR. JANTZ: No objection.

MS. FOSTER: No objection.

MS. GERHOLT: No objection.

MR. FORT: No objection.

DR. NEEPER: No objection.

CHAIRPERSON BAILEY: They are so moved.

(Note: Exhibits 2, 3, 5-1 and 5-2 are admitted.)

MR. CARR: May it please the Commission, our modification to Exhibit A and B and is the subsequent modifications to 20 are part of the record since they were filed. With your permission, I will defer moving their admission in this case until we conclude our presentation. At that time you will have a foundation for all of them we are going to discuss.

CHAIRPERSON BAILEY: That's fine.

MR. CARR: That includes my direct examination of Mr. Gantner.

CHAIRPERSON BAILEY: Ms. Foster, would you care to cross-examine the witness?

MS. FOSTER: One or two questions.

CROSS-EXAMINATION

BY MS. FOSTER

Q. Mr. Gantner, referring to your Exhibit 3-3 --

A. She will have to pull that up.

Q. That is your definition of temporary pit that was in the NMOGA initial petition as well as the IPANM petition, correct?

A. Yes.

Q. It states that the pit is to be constructed with the intent that the pit will hold liquids and you deleted the lines "for less than six months and will be closed in less than one year."

A. Yes.

Q. No clarification, does this mean your temporary pit will only hold pits during its lifespan?

A. No, it will hold certainly the fluids but it will have the cuttings, the other solid that come from the wellbore and that are applied to the muds.

Q. So it will hold liquids and solids from the drilling phase?

A. That's correct.

Q. Thank you. No further questions.

CHAIRPERSON BAILEY: Mr. Jantz?

CROSS-EXAMINATION

BY MR. JANTZ

Q. Thank you, Madam Chair. Good morning, Mr. Gantner. My name is Eric Jantz. I'm with the New Mexico Environmental Law Center. I'm here for OGAP.

I want to ask you a few general questions before I start talking about specifics. Since 2007, before the Pit Rule was passed, have the drilling processes that the oil and gas industry used changed significantly?

A. I don't know what you mean significantly. I mean, they certainly evolve over time, but I don't know what you mean by significantly.

Q. So you basically still drill a hole in the ground, correct?

A. Well, yeah. We drill several stages of hole in the ground, secure it with casing. That process has stayed the same. What you would say has changed is there's much more development of horizontal wells in today's world and the shale plays and that. So that certainly has changed.

Q. More hydrofracking?

A. Well, I don't know what you mean by more. If by sheer virtue of more wells being drilled, yes. Now, every well that we drilled back when I came into the basin was -- almost every well was hydraulically fractured then. So I don't say it's more on a percentage basis. I would say it's about the same depending on if you have type formations versus permeable.

Q. So that actually really hasn't changed that much then?

A. Not in the San Juan. Maybe in other places it has.

Q. In your experience?

A. No, it has not changed.

Q. Has the waste stream that goes in the pits changed since 2007?

A. Not from my perspective. It's the same constituents used in the muds and the completion phase and so from my standpoint, there hasn't been any change in constituents.

Q. And in terms of leak prevention in pits, liners, are you aware of any dramatic changes in technology or is it still just the 20-mil string liner required in the current Pit Rule?

A. If you are talking strictly New Mexico, when I first came in '98 to the basin there weren't requirements for liners. You only had to use a liner if you had sensitive nature. So now it's 100 percent liners or closed-loop. So that has changed. The 20 mil is just what's required in this state. Other states have different requirements like in -- I think Wyoming has a 12 mil requirement. The state of Texas has a different one. But in this state it

is a 20 mil liner.

Q. In terms of the 20 mil string, though, is this the same, in your experience, the same 20 mil you were using when the Pit Rule was implemented?

A. I can say in general that's probably the case. But again, the liner companies come up with new resins and new formulas and that so the liner that was used 10, 15 years ago may be a little bit different from the liner used today.

Q. Okay. So let's talk about some of the things you talk about in your PowerPoint. Exhibit 3-4, the temporary pit siting, you talk about low chloride fluids and the rationale used to get to 15,000 milligrams per liter.

A. Right.

Q. I have actually a couple of questions. At what point during the process is that 15,000 milligrams per liter the standard? In other words, does that include, for example, flowback from fracturing operations which I understand is commonly 100,000 milligrams per liter or higher?

A. Well, again, it depends what you use in your fluids as far as for completion. But this strictly refers to drilling fluids.

Q. So this is the fluids before they

actually -- this is the stuff that actually goes in the hole and is used to --

A. That's primarily the phase of the well that you are doing and then completion comes afterwards. You may use that pit for completion. You may not.

Q. Okay. So it doesn't include any of the contaminants that the fluids may pick up during the course of drilling?

A. Just during the drilling phase.

Q. When you were talking about the 15,000 milligrams per liter, you were also discussing Colorado's rule and you noted that Colorado had a rule. You used the past tense. Is that no longer the case?

A. It does.

Q. It still has that rule?

A. Yeah, I checked on that. It's still there.

Q. Now, on Slide 3-7, the continuously flowing watercourses and significant watercourses, is it the NMOGA's position then that pits -- it's okay to locate pits in ephemeral -- watercourses, streams, ephemeral streams and arroyos?

A. Depends what you define as that.

Q. Using the definition in the rules, in the proposed rules.

A. Right. It's where you would have -- if it's delineated -- just as it's defined there. So if it doesn't meet the definition, then you could have a lined pit in that area. You would not have to use a closed-loop system. But if it doesn't meet the condition, basically if it's not on a map, a little arroyo or something of that nature, then it could be used in that scenario.

Q. I would like to talk about the increased costs. You talked about additional costs for handling cuttings due to inability to drill on-site and the cost for closed-loop. Let's talk about the additional cost for cuttings moving those off-site.

A. Do you know what slide number?

Q. Exhibit 3-9.

A. Thank you.

Q. Sure. Can you give me a breakdown of those increased costs?

A. No, I don't have that breakdown with me.

Q. You don't have that information? What about in terms of those incremental costs as a total cost of drilling, a percentage of the total cost of drilling the well?

A. Again, it would depend on the type of well and that so I don't have that information.

Q. Can you give me a range?

A. Well, up in the San Juan Basin I think probably the cheapest well that I'm aware of would be maybe 500,000, so it would be 20 percent. And if you are talking one that has a horizontal component and more of that you are talking two to three million dollars, so you can figure what the percentage is.

Q. So if you don't have the breakdown, how did you arrive at these additional costs for cutting and handling?

A. Well, what I asked our folks to do, before I would come I said I would like to know for the past four years that we have lived under the rule how many of these that we have had to haul the cuttings because of the siting restriction and I wanted to know what the range of the costs were.

Q. And these costs don't include potential offsets of the costs, right? For example, ability to claim exemptions on federal or state income taxes?

A. I didn't ask that kind of question. Mine was pretty simple. I said just for the past four

years that we have drilled wells, how many of these did we have to haul cuttings back to a central location because of the restriction on siting and they provided that to me.

Q. Do you have a sense of over what period of time that cost was calculated?

A. Well, it would be from the time the Pit Rule was passed in 2008 to the present.

Q. Okay. So --

A. And again, this doesn't say that every location you had to haul. Those that we met the siting criteria, generally, 95 percent of the time we were able to dispose, but these we did not.

Q. So these increased costs only affect 5 percent of your wells? Is that what you are saying?

A. I didn't say that. I said if the siting criteria was met, in general, the cuttings always passed. But these, you didn't even have the option to test the cuttings because arbitrarily, by the current Pit Rule siting criteria, you had to haul them. You had no choice. They had to be hauled, even if it was closed-loop or whatever.

Q. So going to closed-loop, the closed-loop costs that you cite, does that account for avoided liability, environmental liability down the line?

A. The avoidance accounted for was not having to construct the pit. So all the costs of constructing the pit was avoided. In terms of liability, remediation, none of that was included.

Q. So in your direct testimony it mentions that ConocoPhillips had foregone investment in wells because of increased costs. Did I understand that right?

A. Right. For every dollar that you spend to these things, that means you take out of your capital dollars that you could commit to drilling wells. So again, all of these add up to dollars taken out of your capital budget. So if you had -- for example, if I had five locations that I had to haul the cuttings at $150,000 each, that would have avoided probably one well that I could have drilled with that capital budget.

Q. At current prices?

A. Well, yes.

Q. So this doesn't mean, though, that ConocoPhillips is just going to say we are going to forego this resource forever?

A. It says that you don't -- with the capital budget that you have and the company, in terms of where they are going to invest, it says gee, this is

a higher cost environment so we are going to shift the capital over to these places that don't have these costs.

Q. But you don't forego the resource?

A. It may be developed at some later time. I don't know what the pricing environment is going to be. It can change. Right now natural gas in the environment is not very good.

Q. Sure, but in the past it has?

A. In the past it has.

Q. In terms of closed-loop system, can you give me a percentage of the total cost of drilling a well for the closed-loop system that the incremental costs represent?

A. I don't have that information.

Q. Going to Slide 3-11, Closure, you have got a bullet point that says it's established scientifically supportable thresholds. Is it your position that the current thresholds for waste, which is the 3103, the groundwater standards, is it your position those aren't scientifically supportable?

A. The supporting of the thresholds is going to be dealt with by the experts. I am here to tell you that we set up these tables and put the

thresholds that we felt were defensible. The experts will really speak to that in terms of the science.

Q. So you are not taking that position?

A. I am not here to testify to that.

Q. Can we go to Slide 3-14. So as I read the proposed rules, they only require testing underneath the liner if the pit contents are removed and the liner is removed and those contents and liner are either trucked away or buried in a separate deep trench; is that right?

A. There's two cases where you have to test beneath the liner. One is what you said, where you've taken waste off and you've hauled it off. If -- and this is in the operational phase which Jerry Fanning will testify to -- if you have a breach of the liner, something happened where it punctured, then you may have to test beneath that liner then. You may have to drain down to a point, test, see what you find and patch that up. So you may have to test. If you have had a documented breach of the liner that's the other case. But in this case, if you are going to haul the waste and take the liner out, then you have the obligation to test the soils.

Q. Okay. So in instances where the breach may be below fluid level, it may not always be possible to understand that there is a breach, a discoverable breach.

A. Well, from my experience, if it's a pretty significant one, you are going to see fluid levels drop and that's going to be a warning sign. In my experience then you will stop, you will drain down below. You may bring the tanks out there to help you deal with the situation but you will try to get that fixed as soon as possible, which is what the rules require.

Q. That's only with a significant breach?

A. Well, that's one that you will readily see fluid drops. If it's small, you are right, you wouldn't see it.

Q. A small, slow breach you may not?

A. You may not detect that at the surface.

Q. In that case you wouldn't necessarily test underneath --

A. You wouldn't have that obligation. You wouldn't know.

Q. Right. You wouldn't have that obligation. If I can refer to testimony in the Pit Rule, this is Transcript Page 22, testimony of Michael Bratcher,

the field supervisor for the southeast region. I think it's District 2. He said, "Yeah, actually I have got a folder where I brought 19 cases of -- like Polaris. I got to looking at them last night. Out of those 19 there were two that had 250 milligrams per meter of chlorides or less throughout the whole pit. So 17 out of 19 had significant impact under the liner."

Presently 80 percent, could be even more than 80 percent had significant impact under the liner. Under this rule, those significant impacts may go undetected; is that right?

MR. CARR: I object. I mean, we are asking Mr. Gantner to opine on leaks on pits that were presented by another witness. We don't know the nature of the pit. We don't know the age of the pit. We don't know what they were. To just ask Mr. Gantner to confirm that under current rules we would have 80 percent of the pits leaking just because Mr. Bratcher four years ago had a number of pits that were leaking, it doesn't connect and it's asking him to testify about things he could not do.

MR. JANTZ: That being the case, I would like the permission to take administrative notice of the entirety of Mr. Bratcher's testimony in the Pit

Rule, both direct and cross.

CHAIRPERSON BAILEY: If Mr. Gantner does not know the answer or cannot answer this question, then he doesn't have to answer.

MR. CARR: We would also object to just wholesale accepting, because one witness doesn't know another witness' testimony, that you incorporate the entire witness' testimony into the record. When you do that it seems to me you, as a commission looking at the record, are putting yourself in a position of having to go back and read and examine and see what the true facts were on that particular testimony.

When you do that, I would also suggest that maybe you ought to look at some of the cross, what some of the pictures did and did not show. But this is taking us down a side alley that is going to make it very difficult for us to present the case. If you have an issue, you should present it. Incorporating the record is not a substitute for making a case.

CHAIRPERSON BAILEY: The Commission has no context for Mr. Bratcher's testimony. The objection is sustained.

Q (By Mr. Jantz) Going to Slide 3-15,

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Alternative Closure Requirements. It says the district shall approve alternative closure requirements if the operator demonstrates the alternative protects groundwater, surface water and public health, welfare and the environment. By what standard must the operator prove that?

A. I would presume if I was in the case where I was trying to promote an alternative closure requirement -- for example, down in Venezuela I had cuttings that we made bricks out of for the indigenous people. So that would be an alternate closure method for cuttings that certainly could be approved as long as I showed that it was going to be protective of the health and environment. So I mean, that's just an example from my experience of where we used an alternate closure of stuff that would go into a pit. It was actually made into bricks and used for indigenous folks.

Now, what would it be up in this area? I don't know what it would be but you would have to go to the standard that they would see that it's protective and they would approve it.

Q. So really the standard is whatever the district office believes on a pit-by-pit basis?

A. Well, I think they are going to look at

all the facts and they're going to say, okay, here if you dispose of it in a pit, that's perfectly accepted. That's an acceptable practice. An alternate means I will somehow alter it. I will either use the cuttings for something else. I may land-apply cuttings. That would have to get scrutiny. In some states you can do that and some you can't. So those would be examples of things they would say is this going to be protective of the environment by disposing of that in an alternate way? If not, then they wouldn't approve.

Q. So is it fair to say it's district by district? It could be a district-by-district decision?

A. That's fair.

Q. Could be a supervisor, field supervisor to field supervisor decision?

A. Could be.

Q. One last thing. Mr. Carr asked you about whether the proposed rules will protect correlative rights. Can you explain how the current Pit Rule doesn't protect correlative rights?

A. I can't give you, you know, any definition. I know from the present rule correlative rights deal with one's rights to the

minerals that are there, so if I in any aspect of a rule affect any individual's rights to their minerals, to getting fair compensation for the, then I am affecting correlative rights.

Q. So it's vis-a-vis operator to operator?

A. Could be the operator, could be the surface owner. They could have rights. Could be State Land Office. They have certain rights to certain minerals.

Q. I believe that's all. Thank you.

CHAIRPERSON BAILEY: Ms. Gerholt? Would you care to cross-examine?

MS. GERHOLT: I would.

CROSS-EXAMINATION

BY MS. GERHOLT

Q. Slide 3-15. Mr. Gantner, the bottom sentence, "The district shall approve if the operator demonstrates the alternative protects groundwater, surface water, and public health, welfare and the environment," the burden is on the operator, is it not?

A. Yes. We would have to provide the scientific basis of the alternative and show how that is protective of those. And then the district would do that.

Q. If the operator fails to prove its burden, the district would not accept the alternative; is that correct?

A. That would be my presumption, yes.

Q. No further questions, Madam Chair.

CHAIRPERSON BAILEY: Mr. Bruce? Ms. Calman? Mr. Dangler?

MR. DANGLER: Madam Chair.

EXAMINATION

BY MR. DANGLER

Q. Staying with the slide we just talked about, when you were asked about the standard in that slide, there is no additional standard other than this general language; is that correct?

A. That's how it's worded.

Q. And would you opine in terms of your own operations whether it's a good idea to have a vague standard in the field for everyone to deal with or whether the vaguer the standard, maybe you could go up the chain of command a little bit?

A. Well, I guess I don't -- I mean, it is general. But I know from my experience that these offices aren't going to approve of something that's not going to be protective. If they feel that anything that I am proposing to do is going to

impact either public health or groundwater, they wouldn't approve it. So this gives, you know -- certainly it's my burden to prove. I will have to have some scientific data to support that this is protective. I'm going to have to do -- as Ms. Gerholt said, I will get a study done to say, "Hey, this is going to be protective. I would like to use this." Probably they might approve it on a pilot basis first to see if it works before they would go wholesale where I could use it.

Q. I am just wondering and perhaps you could help me with this, why a decision with a fairly vague standard might not be made for the whole state at Santa Fe level, why this would be made at the district level?

MS. GERHOLT: Objection. I would say that's a question better asked to a member of the Oil Conservation Division as to their policy.

CHAIRPERSON BAILEY: Would you care to rephrase the question?

MR. DANGLER: The only other question I would just ask is a follow-up and it's slightly different. It would not be that question. I don't have a rephrasing of the question, Madam Chair. I can ask another question that may close down this

little inquiry.

CHAIRPERSON BAILEY: Why don't you ask the other question.

Q. Is there a suggestion for a better standard if it's going to be in the district office? Was there any discussion of that?

A. No.

Q. Now, if we might shift to Slide 3-9. Before I go there, I have a couple of questions that came out on the cross. I think I heard you state that when there was no need to move the cuttings off the site and the cuttings stayed and were buried for your company, that your cuttings always passed the current criteria?

A. I won't say always, but a high percentage.

Q. Okay. So basically your company had no problem with the current criteria for cuttings staying where they are?

A. I won't say they had no problem, but we were generally able to a high degree to be able to dispose on location, save for those arbitrary siting restrictions that said absolutely not.

Q. And I think there's been some discussion about the some 400 more or less leaks and how you personally had been able to go back and review that

criteria and found that most of that was from earthen holding ponds; is that correct?

A. Earthen production pits.

Q. Production pits?

A. Which were the common practice -- you know, back, permitted under the rules that fluids could be put into those unlined production pits.

Q. And at that time is it fair to say that a developer could have used a lined pit at that time?

A. Could. Could use a tank.

Q. They could have used a lined pit at that time; is that fair to say?

A. Could.

Q. Were there linings in effect and was that product available at that time?

A. I would have to go back and see. But liners have been, you know -- I have been in the environmental field for 30 plus years and liners have been available for landfills for at least that long.

Q. So in the absence of a regulation requiring a liner, various operators chose not to have liners and there was something in the order of 400 leaks at that time?

A. Well, the case -- you know, history speaks

for itself.

Q. Would you agree with that statement or is there something about it that's wrong?

A. I would just say that there have been leaks that resulted from unlined earthen production pits and history shows itself.

Q. All right. Returning to this slide, I believe you testified that perhaps the average cost of a horizontal well was two to three million dollars?

A. No, I did not. He asked me the range because he was trying to relate the additional cost, what percentage that was.

Q. Correct.

A. And I said okay, the cheapest well in the San Juan Basin for a vertical well could be as low as $500,000 and then upwards of two million, and that could be a horizontal. That could be as well a vertical well.

Q. What would be your estimation of a horizontal well?

A. If you are talking a horizontal well with multiple stages of completion, it could be ten million dollars.

Q. So that range might be from two million to

ten million?

A. Yeah. We haven't drilled one.

Q. I also heard you testify on direct that there were a number of occasions that you added together to come up with this figure where your company would have chosen to have a closed-loop system regardless?

A. Some cases you may choose, such as within the city limits. I think a pit in the city limits you have to look at the situation, so I think under certain circumstances, if you are close to a stream, something like that, you may choose to do it irrespective of the siting criteria.

Q. So does that mean that you did or you didn't call for the list of cases where there was a closed-loop system to see where it would have been necessary regardless of the regulations?

A. I just asked them to give me the history of how many wells they drilled with closed-loop and the costs of that were versus a pit.

Q. So what we have is a combination of all of the cases where closed-loop well was --

A. Whether it was a regulatory-required or not, that's correct.

Q. In terms of decision-making for your

company and the money decisions and how they are made, how familiar are you with that decision-making process?

A. Certainly generally familiar. I'm not the one directly making those decisions.

Q. So you are not testifying today to some factor or decision-making that this cost might reflect?

A. Again, my expertise is in environmental engineering so I am certainly an expert in those aspects. My expertise is not in drilling wells and all the costs associated with it.

Q. And do you have any studies, other than what you asked your staff to provide for you, that give us any cost breakdown on closed-loop systems and their additional costs?

A. No. Again, closed-loop is used throughout the country and I asked for San Juan Basin.

Q. And do you think it would be possible to provide that kind of breakdown and more information on that? Would that be possible?

A. That's an extensive effort that would be done for me to do that.

Q. I would like to ask if you're familiar with the RCRA exemption for oil and gas?

A. I am familiar with it, yes, sir.

Q. And what does it provide for basically?

A. The RCRA exemption for hazardous waste basically says that for waste generated from the oil and gas -- the upstream side where you are uniquely associated with oil and gas production, are exempt from the hazardous waste regulations, and that's basically the essence of the exemption.

Q. And could you characterize the benefit to the oil and gas industry?

A. Well, what it means is that you are able, through the state jurisdictions, to handle those wastes in the manner that they have provided. So those wastes get managed in a certain way. That's why E.P.A., when they went and did their study, they looked at the way the various states managed these and decided not to seek a change in that exemption. They said based upon that study and their look that the wastes were being managed in a manner that they did not see a need to seek an -- you know, an exemption or removal of the exemption.

So those wastes are disposed in various manners. You have deep well injection, you have surface disposal, you have land farms, you have various ways. You can also dispose of them, in

certain jurisdictions, in the back side of your hole where you go down-hole with it.

Q. Would it be fair to say --

MR. CARR: I'm going to object to this line of questioning. It goes far beyond direct and the issue here. Unless they can show how it's relevant, I object.

MR. DANGLER: I'm about to show how it's relevant, Madam Chair, if I might.

CHAIRPERSON BAILEY: Next question?

MR. DANGLER: That would be it.

Q. Does the existing Pit Rule apply studies and constituent concentrations less than the RCRA concentrations?

A. Well, I need you to rephrase the question. I don't understand what you're trying to ask me.

Q. Less stringent? Would that make sense?

A. Less stringent than what?

Q. Than the RCRA standards.

A. When you speak to RCRA standards, which RCRA standards are you speaking to?

Q. For example, the level of Benzene allowed?

A. The level of Benzene --

MR. CARR: Objection. I would like the question clarified. If he is talking about strictly

RCRA numbers, which I don't think are relevant, or if he is talking about wastes exempted from RCRA, that's a different issue. But are we talking about numbers that are lower than RCRA for wastes exempted from RCRA? I think we need a foundation here. It's hard to answer a question in the state it is.

CHAIRPERSON BAILEY: Would you like to rephrase the question?

Q. Are you unable to comment on the stringency of state standards versus RCRA standards in general?

A. I certainly know from the various states I operated in how they regulate oil and gas waste so I know how they regulate RCRA waste. Again, the wastes are all managed in the manner that's protective of public health and the environment, and right now the RCRA exemption does give certain E & P waste an exemption from the strict treatment of the RCRA standards. You still, under the various state rules, still have to treat those wastes in a special way and they manage those. In the state of New Mexico those wastes have to be managed specially.

MR. DANGLER: Thank you. No more questions.

CHAIRPERSON BAILEY: Before we go to

Dr. Neeper and Mr. Fort, Theresa, would you please bring me the list of people who would like to make public comments before lunch? We will see how many people there are. We have nobody signed up to make public comments. So Dr. Neeper, would you like to cross-examine the witness?

MR. NEEPER: Yes, unless someone else would like to go first. I may go more than 20 minutes if you are aiming at a noon lunchtime.

MR. FORT: I will be very short.

CROSS-EXAMINATION

BY MR. FORT

Q. Mr. Gantner, you mentioned about testing the contents of a lined temporary drilling pit. What is the cost to test those contents? You can give me a range.

A. I would say 3- to $500 for the constituents listed.

Q. Is that the same cost -- the cost that you are referring to would be the cost under the current standard?

A. Well, I think it would be comparable to the cost of the NMOGA standard as the current standard.

Q. That answers my question. Assuming they

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fail, is the cost to test the ground underneath the liner, is that the same cost as the cost to test the --

A. It would be the same.

Q. The same? We are walking about $300 to $500 and possibly doing it twice -- or again, excuse me.

A. Well, again, we need to make sure we are talking the same thing. When you are testing the contents, you are testing the contents of the water and what's sitting within the liner and you are going to test those. If they fail, you are going to take those out, remove the liner. Now you are going to test the soils in five-point composite manner, and that test will be the same as under the current rule as the proposed rule.

Q. Each of those tests, the range would be 3- to $500?

A. Yeah. The soil test might be a little less, but pretty close.

Q. Thank you. That's all the questions I have.

CHAIRPERSON BAILEY: Why don't we break for lunch.

MR. JANTZ: Madam Chair, it's been brought

to my attention there is somebody who has public testimony. Unfortunately, I think he overlooked the sign-in sheet.

UNIDENTIFIED SPEAKER: Yes, ma'am. I didn't know you had to sign in.

CHAIRPERSON BAILEY: Come and sign in and we will give you five minutes.

UNIDENTIFIED SPEAKER: My remarks are going to be rambling. I started with this guy right here.

CHAIRPERSON BAILEY: Would you like to be sworn or unsworn?

UNIDENTIFIED SPEAKER: I don't care.

CHAIRPERSON BAILEY: It's your choice.

UNIDENTIFIED SPEAKER: I'm no expert, so maybe we better not swear me in.

CHAIRPERSON BAILEY: Unsworn and no cross-examination.

UNIDENTIFIED SPEAKER: I don't want to be -- I'm just going to make a rambling statement.

CHAIRPERSON BAILEY: We will give you five minutes.

COMMENTS OF CARL LANE JOHNSON

UNIDENTIFIED SPEAKER: I started with Pete Porter. I ranched in southeastern New Mexico in the

oil field. I want to tell you that you guys brought the best company that's ever operated on me since 1962, ConocoPhillips. The best.

Okay. I'm going to -- I've got locations built on me over 50 years with open pits and as bare as this ground. I have got pits built on me in the last five years with closed-loop system, covered with vegetation. It's not native vegetation but there is something growing there. If you have a pit there for one year and you leave it there one year, the underground water can be contaminated in days. How much less freshwater does the closed-loop system use against the old lined or unlined open pits?

And folks, freshwater in southeastern New Mexico is absolutely going to be worth more money than oil. Not in my lifetime, but as you all are well aware, they have places in Texas that they can't even get water to frac with. Do you have any idea how much less water you use with a closed-loop than with an old style open pit?

MR. CARR: May it please the Commission, these are comments, not questions.

CHAIRPERSON BAILEY: Yes. He does not need to answer.

UNIDENTIFIED SPEAKER: Okay. I'm throwing

it out. The cost of building a well on a closed-loop. I just had a well drilled on me for around seven million dollars closed-loop. They saved on their freshwater cost because they didn't hardly use any freshwater cost, and I don't know, if the closed-loop cost over and above $100,000 what percent is that against seven million? That's not a question, just a statement.

And if a pit left in place is not a solid waste pit and it's left there from now on, then what is it? It's the same as solid waste.

Another thing. Inside this room is totally, totally, totally different than in the field in southeastern New Mexico. If you guys haven't been down there, it is crazy. There's no qualified personnel. They can barely get a well drilled. Nobody is following any rules or regulations. DOT can go down there and stay and make their company rich. It's a disaster. They are moving rigs from -- they have rig movers to our area because there's nothing to do there and they are covered up here.

At the very best, when we're all said and done down there, that's going to be a wasteland. If we do everything right, the southeastern corner of

New Mexico is going to be a wasteland. I understand, and you can correct me if I'm wrong, there's supposed to be 17,000 new wells drilled in the southeastern corner in the next five years. I don't know. That's just what I heard. That was coffee shop talk.

I would like to see New Mexico -- the OCD personnel, field personnel, be tripled because they can't even -- they are totally swarmed and that's about all I have to say.

CHAIRPERSON BAILEY: For the court reporter please state your full name and where you are from.

UNIDENTIFIED SPEAKER: My name is carl Lane Johnson from Tatum, New Mexico. Third generation New Mexico rancher since 1950.

CHAIRPERSON BAILEY: Thank you, Mr. Johnson. We will now break for lunch. We will return by 1:00 o'clock.

(Note: The hearing stood in recess at 11:47 to 1:00.)

CHAIRPERSON BAILEY: We will go back on the record. Mr. Gantner was waiting for cross-examination by Dr. Neeper.

CROSS-EXAMINATION

BY MR. NEEPER

Q. Thank you, Madam Chairman. Mr. Gantner, you may wonder why I'm here. I requested permission of the Chair to offer you questions in front of you rather than from behind you.

A. Okay.

Q. So I am temporarily in this place. You have told us the reason for the chloride standard for the low chloride drilling. As I understood it, that standard was really established for the convenience of the industry so that your routine fluids could meet it and not for environmental reasons; is that correct?

A. No, sir. I feel that we needed to set a different risk-based standard for pits using water-based fluids, low chloride drilling fluids for pits that are in that versus pits that aren't using low chloride fluids. I felt there was a risk-based need to have a difference.

Q. But the numerical standard that established what is low chloride, you indicated that your fluids sometimes approached that number and, therefore, it was an inadequate number, if I understood correctly; is that right?

A. Again, I'm not sure what you are speaking

from. I explained that we needed a low chloride water-based type of number and then I researched various states, what they had, as well as what we were using, and came up with the 15,000 milligrams per liter.

Q. Did you consider sodium as well or just chloride?

A. I just looked at the chloride since that's what most states have. I looked at the chloride.

Q. So then you feel that our regulations should be guided by those of other states as opposed to our starting with determining our needs and going straightforward from there?

A. No. Again, we felt that the one-size-fit-all did not fit the water-based fluid, pits using -- temporary pits using water-based fluids versus those not using water-based fluids. So the chloride was really just a differentiating factor between those two.

Q. There were questions this morning regarding setback, and you explained setbacks as dealing with the risk, if I understood it, from the fluid. Do you remember whether in developing the previous Pit Rule or the existing Pit Rule, was the setback established in part simply to provide

physical protection for an arroyo whether or not it carried water; that is, avoiding land disturbance next to an arroyo?

A. What I recall, I looked through the prior testimony in the prior Pit Rule, and to get the basis that they had for the siting setbacks. And what I recall from reviewing the testimony that was given, that they needed equipment spacing to be able to get around these pits in terms of anchoring the pits and that. And there were other factors, but that bears no basis for my perspective. That you can get around even with the siting that we proposed, around these pits with heavy equipment without a problem. But we did look at the prior case, the testimony, to see what was the basis that they had set these siting restrictions.

Q. There were earlier questions about costs and you had said that just wasn't your area; that others would testify to that. And what I'm driving at here is not to corner you but rather to seek the various authorships for part of the rule so we can follow the logic behind parts of the rule. You were an author but you may not necessarily be the person who explained the reason. I understood your explanation to be that. But if you would not be

testifying on the costs, would anybody? And if so, who would be testifying on costs to the industry as a whole for this rule?

A. Well, on the environmental costs, I did testify on those. I testified about the costs -- increased costs that resulted from having to elevate facilities because they couldn't be below grade based on the existing rule siting. And then I also testified about the increased environmental cost, the disposal of cuttings because the siting criteria arbitrarily said no matter how clean those cuttings are, since they were within the boundaries that they set, they had to be hauled.

So those costs I can testify to. What I said I couldn't testify to, they asked about drilling and completion costs. What is the cost to drill certain wells and what are the various elements. I'm not an expert in that so I didn't come prepared to do that.

Q. But as you are the author of this rule or an author of the rule, would you say someone will testify industry-wide as to the environmental costs and the correlative costs relative to the costs of wells?

A. Well, again, I testified to the

environmental costs. And they asked me for a general perspective of what was the lowest cost well and the higher cost well to do in the San Juan and I gave those. That did not delineate what those various costs were.

Q. And as far as you know --

A. I know of no one --

Q. There will not be testimony?

A. Again, I don't know that, but there's other people here to speak yet today.

Q. I'm sorry?

A. There's other people here for speak yet today and the rest of the week.

Q. But you don't know whether they will cover that topic?

A. I do not.

Q. Regarding closure of a pit, do I understand it correctly that the operator is not required to remove the liner provided the content of the pit meets standards?

A. The current rule and what we have proposed --

Q. And the new rule?

A. Right. The rules we proposed, the liner does not need to be removed as long as the

constituents that it's holding, the cuttings, the remainder of the muds and that, pass the test. Then the liner and the cuttings would be disposed in place.

Q. And you said you could know for a liner that was not picked up, you would know whether or not you had a leak because you could detect a leak by the loss of level in the pit. Can you tell me as an environmental supervisor what rate of loss you can detect?

A. I can't. I just know from past practice, Dr. Neeper, that very few in my career have liners leaked. But the cases where they have, they have had a massive drop in fluid which was an indication something had punctured below the mud line. And so that -- again, I can only remember one instance in my 14 years out here that that's happened. There have been cases where there was punctures above the mud line but those you can readily see and those get fixed and they weren't impacted because you didn't have fluids behind them.

Q. If I give an example, for instance, of a tenth of a foot per day, you wouldn't be able to say whether you could detect that rate of loss?

A. No, unless you saw some bubbling or

something happen, but that seems rather slight.

Q. Thank you. You had said that a pit should not really merit all of the regulatory attention and restriction that is given to a landfill, and you had decided some of the things that go into landfills. But isn't a buried pit or a trench actually just a landfill of smaller size but containing noxious things?

A. No. See, I see them as different, Dr. Neeper. A landfill, and if you heard my background, I've got eight and a half years at solid waste companies, so I have been around landfills. Landfills, you are bringing waste from hundreds of homes, municipalities and that, all that have to meet the solid waste definition. And those are brought some containing fluids, some containing not. So that's a different scenario than a single pit drilled for a single well which you now line and then once it's completed you dry out that -- you mix it with soil and now you bury it. That is a single, discrete event that sits there, again, depending on if you use water-based fluids or others, and then you test those constituents and they pass.

That is a different scenario than a landfill that's got a 10 to 20-year life that has

those materials buried. You get leachate formation which now you have to have a leachate collection system. It's apples and oranges. To me, it's much different.

Q. The rule, as I have read it, has few restrictions regarding groundwater unless the aquifer is unconfined. Do you see it the same way as an aquifer?

A. Well, we left groundwater in terms of certainly you want to protect groundwater. The only difference that we had in our piece was to distinguish on a risk basis to say that you can be closer to groundwater for this temporary pit for low chloride fluids than you could if you were using a brine fluid. Now, once the pit is ceased to be used and now you have to test to verify that you can meet the constituents. If you can meet the constituent levels, then that will be buried in place.

So groundwater is still protected in both cases, both during the time when you are using the pit to drill, complete, work over a well, and then at the end, if you meet the constituent level you will bury that in place. And it is -- and you will hear from experts later those proscribed distances that we have proposed are protected.

Q. By proscribed differences, you mean depths below the burial?

A. That's correct.

Q. Do any of those depths apply to confined groundwater?

A. Well, confined groundwater that's not being fed, again, I think you better ask that with the expert that's on the water basis. But again, confined, perched groundwater is not groundwater.

Q. I realize perched groundwater not confined is still groundwater. May or may not be usable. However, does any part of this rule protect confined groundwater? Does it not everywhere say unconfined groundwater?

A. I think you have to read the rule. It states what it states.

Q. But you can't say what the rule says?

A. I can read the rule as well as you. Whatever it states is what it calls for.

Q. Would you agree that at least in some instances, if not in every instance, the rule refers to confined groundwater or unconfined -- let me correct myself.

A. I believe it refers to unconfined groundwater.

Q. How would you determine, as an expert which you are, in environmental protection in the oil field, how would you determine whether an aquifer is confined or unconfined?

A. Well, I would go certainly hire experts that deal with that, people that know their groundwater certainly more than I. I mean, I have been involved with groundwater from various industries that I have worked for, and obviously you need to conform to the rules in protection of groundwater, particularly groundwater that's got usable quality to it.

Q. But let us take an example. There's an operator who may not be as large as ConocoPhillips, and he says, "I'm going to bury my waste right here and the groundwater is confined so there is no limit on the burial."

A. Well, he's --

Q. How do we argue with that person?

A. Well, he has to turn in an application to permit the drill and he has to satisfy both to the rule as well as to the OCD's jurisdiction. And the rule states absolutely baselines what need to be met, but then it says as well if you read -- I think particularly there's a section that said if the

Division feels that additional things need to be done, that those can be required as well.

So that's where the OCD, based upon the application and that, will determine if they have met the requirements of the rule or the additional things that they feel necessary to protect groundwater.

Q. I'm not sure I understand the answer. I'm trying to deal with the rule and not OCD extending to some other situation or restriction that they feel they need to impose. What I'm trying to get at is a strong part in the rule which is a distinction between confined groundwater and unconfined groundwater. You have said that you were the person who drafted the first red line of this rule. That included presumably the definition of unconfined groundwater.

A. Well, I did the first red line, but then we had task groups, and various people had input into various pieces. So certainly as you would agree, when you draft a first piece there's going to be others to comment on it. There's going to be additional pieces. So I think when it comes to what you're talking about, as far as unconfined groundwater and that, you will have an expert

witness coming up.

Q. Could you name the witness so I don't pester every witness with the question?

A. I believe the two people would be -- let me look at my list here. I believe Dan Arthur is going to be the person that you will address with that.

Q. Based on your experience and your knowledge of what is in the rule, does any routine, everyday drilling or workover operation ever generate chlorides that would exceed the limit of Table 2, which is the burial limit?

A. I would have to refer specifically to that table. But up in the Four Corners is what I can speak to, and again, using freshwater mud systems and that, generally chlorides is not a problem.

Q. I understand chlorides is not a problem usually in the northwest, but throughout the state?

A. I would have to let others and Mr. Fanning, who you will have coming up here, speak more to the southeast part of the state than I can.

Q. So you do not know whether those restrictions in Table 2 are way above what would be normally encountered in the southeast or are marginal or are threatening some operations in the

southeast?

A. I'm not intimately familiar with the southeast operation.

Q. Thank you. This morning you discussed the meaning of the word visible. And if I understood correctly, the rule defines it as something you can see that covers 30 percent or more of a pit surface?

A. That's what we would propose.

Q. The rule distinguishes visible and measurable as two ways to know how much oil on the surface of water or fluid is too much oil. Measurable in the rule, as I read it, is tested by color coding?

A. Color cutting.

Q. Color cutting. Excuse me. Can you describe how color cutting can tell how thick is the layer that's floating of the substance?

A. I can tell you what the practice is. They put a paste on a tape and when they dip that into the solution or whatever, we will get a discoloration distinguished between water and oil, and it will show the thickness of the oil there.

Q. Would the distinction between visible and measurable have its origin in WQCC prohibition of no floating on nacreous petroleum liquid as reasonably

as can be measured? That was the wording in the WQCC.

A. I don't know. That's what you say it is.

Q. The rule -- correct me if I'm wrong. The rule defines tanks as something exceeding 500 gallons or equal to or greater than?

A. Well, the distinguishing thing, let me state, is between a sump that's, you know, subsurface under the ground and a below-grade tank, which is below grade as well but it's a higher volume. So not above-ground tanks but distinguishing between a sump and a below-grade tank, yes.

Q. Isn't a sump normally intended to be not holding liquid? It just catches a few drips now and again.

A. It may be more than a few drips but the intention is once it receives the fluid that you are promptly, prudently going to empty that so it remains basically empty. It's not in storage versus a tank that is going to be storing liquid for some period of time.

Q. So if we have an object that's less than 500 gallons but it is storing liquid, that is not covered by the rule? Is that correct?

A. Well, it certainly doesn't fall within that definition. Now, you have other rules that may apply to tanks other than the State of New Mexico. From an E.P.A. standpoint, if I had a tank, doesn't matter what size, that has oil and I exceed those quantities, there's certain things I have to do. But as far as this rule is concerned, you are correct. Below-grade tank, below-grade, 500 gallons or greater. A sump is less than 500.

Q. So if you as an operator have a vessel containing 490 gallons and it's routinely filled and maybe occasionally emptied but things discharge from a dryer or something, that is without regulation, correct?

A. Well, if it's subgrade it would be a sump.

Q. But a sump is not supposed to store waste. It's supposed to be emptied.

A. I understand. But by definition, that meets the definition of a sump.

Q. So a sump can contain liquids indefinitely?

A. Well, I'm saying what the common practice is, is that it does not.

Q. Is common practice that all subgrade vessels other than those that occasionally get

something are immediately emptied greater than 500 gallons?

A. There's probably not a distinguishing factor by volume in the industry. A sump is a sump and you intend it to just capture something and shortly after empty it. And a tank is a tank meant for storage.

Q. But there is no tank that's regulated? There is no object that routinely holds liquid then, less than 500 gallons, that is --

A. If you are talking below grade.

Q. Below grade.

A. By definition it would not.

Q. Totally outside the rule?

A. That would be correct.

Q. The rule specifies -- the new rule specifies that a tank should have an alarm to prevent overfill. It also specifies that a tank should be inspected about once a month. Is there a reason you can give why the alarm provides equal or better protection when the tank is inspected only once a month than an automatic shutoff valve?

A. I can certainly answer the question, but my testimony isn't related to below-grade tanks. Mine is to siting and to closure criteria. You will

hear from Mr. Ed Hasely about below-grade tanks so I think you should reserve that question for him.

Q. He can answer that question?

A. Yes, he can.

Q. Thank you. A final question. Can any solid used in the drilling process be buried along with other waste in the pit or trench? Now, I'm being careful and I will warn you, I don't use trick questions, but in a sense this is a trick question so I will explain it. I hate trick questions.

The key word there is solid used. What I'm really saying is suppose I'm an operator and for some reason I'm doing a process on my drill rig and I break the handle off of my tool. That is solid; it is used in the drill process. I throw it in the pit. It is now a used solid in the pit. Is there any prohibition for that?

A. No. I would say it doesn't meet the intent or the definition. The solids that you are allowed to have in the pit, and I think you can look in the regulations and check this, is the solids that you are allowed to put in the pit have to be associated with the drilling or completion of oil that, you know, come -- basically from the well. I'm not allowed to put buckets that I used on the

rig. I'm not allowed to put wrenches that I used out there. Those are not uniquely associated with the production of oil and gas from a well. So my interpretation would be no, you can't have isolated pieces, just like oil that could leak off the rig. It can't go into the pit. You need to extract that and remove it.

Q. In terms of the wording then, would you have any objection to using the word "mineral"?

A. I would be glad to consider it.

Q. In place of "solid" used?

A. That's certainly the intent we are talking about.

Q. Thank you for your patience.

CHAIRPERSON BAILEY: Mr. Fort? Would you like to cross-examine the witness?

MR. FORT: I already did right before lunch. I went out of turn.

CHAIRPERSON BAILEY: That's right. Thank you. So now it's time for the commissioners. Commissioner Balch, do you have questions?

EXAMINATION BY THE COMMISSION

COMMISSIONER BALCH: I have a number of questions. Can you clarify as to why it's important to have off-site pits in the temporary pit

definitions?

THE WITNESS: That's a good question. We have had problems in the past of where an operator has asked for permission to have a pit that could be associated with a different well but for taking the cuttings for two wells to one location. And because of the way the current rule is written, they were denied saying that no, you didn't meet that 100-foot definition so we carefully said that we wanted the option, as long as it's nearby, that you should be able to take it -- as long as the Commission knows or the OCD knows about it and as long as they see that it's protective, there should be no reason why I couldn't use one pit to dispose of cuttings from two wells.

COMMISSIONER BALCH: Under your definitions for continuously flowing watercourse, what was the basis for forming that, for forming the definition? Is that something to what you would find in a service hydrology textbook or Wikipedia?

THE WITNESS: I have seen that terminology before. I couldn't quite quote where I have seen it. But the thing we were striving to gain there is that in certain jurisdictions they were taking any -- that you were prohibited to have a pit near a

basically some sort of watercourse. So you had two types. You had continually flowing, which I think to the common person's definition they think of the continuous flowing like the San Juan River or maybe something like the -- I'm trying to think of the one -- I think it's the Blanco Wash where you have a substantial period of time where it is flowing. Those are certainly the intent, that you don't be within a certain distance of those. But to occasional -- a dry wash or a rill that is there that you shouldn't have a restriction of 100 feet or 300 feet from something like that. Because up in the northwest, and I imagine down in the southeast as well, you have those kinds of depressions all the time, and to say now I can't put a pit there didn't make sense to us, so that's why we incorporated that definition.

COMMISSIONER BALCH: When you were talking about closure, you talked about the synthetic liner cap or burial on-site. Is there a particular reason to not leave a cap there?

THE WITNESS: For the trench, yeah. Correct me if I'm wrong, but I think for the existing pit, if you had an existing pit, that didn't ever require it. If you went and then

created a burial trench, the current Pit Rule required you to put your liner in addition to the soil. And as you will hear from our experts, they looked at that, but that was an additional -- call it protection. That didn't serve the protection; that you got enough protection from salts migrating from the surface with four feet of cover. So it was an unnecessary cost.

COMMISSIONER BALCH: You have agreed to a time span for temporary pits of up to one year. Is there a good reason for the delay? Is this operational?

THE WITNESS: Well, occasionally -- and again, I will say that generally we are able to -- at least my company in the northwest, we are able to do it within six months, many times less. But there's occasions where we don't and we need additional time. And rather than continue to burden the District and the Division with numerous requests to extend these, we felt that allowing the one year, which is consistent with what other states allow for, would be protective and then you didn't have to burden them with these requests. That's why we proposed that.

COMMISSIONER BALCH: Thank you. My final

question also has to do with the visible sheen. I'm going to guess that all pits are not the same size.

THE WITNESS: You are right.

COMMISSIONER BALCH: Or necessarily even the same shape. So 30 percent of an area of one pit may not have the same amount of sheen as another pit next to it that's larger or smaller.

THE WITNESS: Right.

COMMISSIONER BALCH: Wouldn't it be better to put the diameter on the defined area?

THE WITNESS: You could. I remember in those discussions when we were trying to grapple with the issue, when you are dealing with a sheen, you can take this Red Bull can here and empty it onto a put and you will get a nice-sized sheen across it, but that's not a lot of oil. So it was a matter of at what point do we want operators to take action to protect wildlife from getting in there and getting impacted by that. So your suggestion could be another way, some way to say this is significant, this is not.

COMMISSIONER BALCH: Such as your color test?

THE WITNESS: Well, the color test is measurable. If you had something that's measurable,

that's more, much more than a sheen.

COMMISSIONER BALCH: So this would be for unmeasurable or --

THE WITNESS: Right. Unmeasurable that you couldn't measure with a color table.

COMMISSIONER BALCH: Those are my questions.

CHAIRPERSON BAILEY: Commissioner, do you have questions?

COMMISSIONER BLOOM: I do. Mr. Gantner, thank you for your presentation today. A few questions. Some of these might be ones that can be addressed later on but if you could take a stab at them, fine. If not, we can put them off until later. We would be extending pit life, as Mr. Balch stated, from six months to twelve months. Do we have any understanding what the increase of risk would be in doing that?

THE WITNESS: Well, again, you're talking closure. And the fluids -- in my mind, you would still pull fairly soon but it's a matter of letting the cuttings and that to dry out. When you pull the fluids you, of course, get it down to as reasonable as you can but there's often a layer there that's kind of mushy and you allow that to dry out. It

affords a greater time period for those to evaporate and solidify. So, you know, in my mind in our sector, I don't see an increased risk but I can understand the concern about the length of time. So it's trying to balance that closure as well as allowing for the additional time that you might need to dry it up.

COMMISSIONER BLOOM: Is the extra time intended to allow for greater evaporation of liquids?

THE WITNESS: That's part of it. Sometimes you get into seasonal closures, so in certain areas up there I know we can be drilling right up to the seasonal closure and now we have a closure time that goes four months and now I have a very short window after that point to get back in there and do things. So it's part for that.

COMMISSIONER BLOOM: Again related to risk, Dr. Balch talked about off-site pits and potentially disposing of cuttings for more than one well in those pits. Are there proposed regulations or regulations in place that you're aware of to determine how much could be disposed of in these off-site pits.

THE WITNESS: Well, you are certainly

limited by the size that the rule calls for. You can't be above a certain size. But the opportunities that I have seen come up that we have had to forego is to where we could do two wells in an area and use one pit. That's the things I'm thinking of. I'm not thinking of multi wells, having a landfill or a land farm there, but the occasional opportunities lost is being able to have one pit serve two wells and bring both of them because of that 100-foot arbitrary addition kept you from doing that.

COMMISSIONER BLOOM: Again, on quantity, you mentioned multi-well pits. I think we will hear more about that later, but in NMOGA'S and IPA'S proposals, is there a limit to the volume of the multi-well pit?

THE WITNESS: I believe there is but Myke Lane, who will be addressing that, I think, can speak to that.

COMMISSIONER BLOOM: Do you know if there's a lifespan as well?

THE WITNESS: I think there is. Again, not being uniquely involved with writing that. But I thought it was something in the order of a couple years. I think he would be better to speak to that

to be correct, but that's my recollection, that it did have a lifespan. It couldn't be in the order of like a permanent pit would be.

COMMISSIONER BLOOM: These may be questions to put off for later as well, but about increased risk from proximity to water in wetlands.

THE WITNESS: I think you will hear the experts state to the distances that we have proposed that they are protective.

COMMISSIONER BLOOM: Just a couple more. I will save my questions. We will hear more on the below-ground tanks later. I recall hold those questions then. This may be a question for Mr. Smith here, our counselor, but is there an opportunity for us to get -- to keep the record open at the end to allow more financial information to come in? We had a number of questions about how you came up with costs and you're not the accountant. You pose that question to your staff. Is there a way that we can get more information on that before we close the record?

MR. SMITH: Yes, you may do that.

COMMISSIONER BLOOM: That would be wonderful. Finally -- correct me if I'm wrong -- did I see in the current rule when there's burial

marker at the position, does that continue in your proposed rule?

THE WITNESS: I think some sort of marker continues. I might be wrong, but I think the thing that was taken out was that you had to have this piece sticking out of the ground. In fact, when we do it on a private surface, a lot of landowners don't want anything on their property. We have occasionally gotten approval to put a plate or something as an exception. But I think we took out to where you had a marker of so high.

COMMISSIONER BLOOM: My concern would be for state and federal lands just in the future if the land was put to other use.

THE WITNESS: Right.

COMMISSIONER BLOOM: If somebody went down to the liner. Thank you. No further questions.

CHAIRPERSON BAILEY: I have a few. Are you the right person to talk to about the definition of sump?

THE WITNESS: I believe that's Mr. Hasely who is going to talk about that. I'm familiar with it.

MR. FELDEWERT: If you can answer the question.

CHAIRPERSON BAILEY: The question has to do with the definition where it says "with a capacity equal to or less than 500 gallons which remains predominantly empty and serves as a receptacle for de minimis releases." But there's a contradiction with Section L-H when we are talking about de minimis releases into a sump and the definition, and in L-H when we are talking about -- let me find it. It talks about drying pads associated with closed-loop systems and 11 H 2 requires a sump to facilitate the collection of liquids derived from drill cuttings. Now, that may not be de minimis.

THE WITNESS: Yeah. I think again, the intention, a sump needs to be large enough to collect whatever drainage you may have and allow you a prompt time period to empty it into the right venue. So if there's a conflict, I'm not sure. But that was the intent, and you had to distinguish between what's a below-grade tank and a sump because you always had to have some break to where you knew, you know, where a sump began and where a below-grade tank was.

CHAIRPERSON BAILEY: Right, which is the volume but not necessarily the use. You did bring

up the definition for temporary pit.

THE WITNESS: Right.

CHAIRPERSON BAILEY: The last sentence of that definition says, "Any freshwater containment structure such as pond, pit or other impoundment is not a temporary pit." Now, the inference is that that's an untreated freshwater containment system.

THE WITNESS: Yeah. I think the reason I brought up that we have had issues in some districts is somebody was saying well, that's covered under the Pit Rule. If it's a freshwater pit, in our minds it's not received cuttings, not received waste, so it's freshwater so it is not covered.

Now, I think you are speaking of if I take water and treat it and put it into there. I mean, if it was produced water I would say it would still be produced water until we got a determination from the district that it's no longer produced water. To me, produced water always remains produced water until the division says it's not.

CHAIRPERSON BAILEY: So would you object to the insertion of the words "untreated freshwater containment system"?

THE WITNESS: No, I don't see a problem.

CHAIRPERSON BAILEY: To go to Section 10

for siting requirements, where it talks about changing the distance. Now, that's not going to be your area, is it?

THE WITNESS: Well, I spoke to why they said what we did. In terms of protective of the public health and the environment, that will be the experts that will say that those distances are protective. I'm just speaking to why we set these distances up.

CHAIRPERSON BAILEY: My concern has to do with protection of unconfined as opposed to all waters protected by -- designated by the State Engineer.

THE WITNESS: I think that question would be best deferred to the experts.

CHAIRPERSON BAILEY: Well fluid management pits? Somebody else?

THE WITNESS: That's Myke Lane is the one who will address that.

CHAIRPERSON BAILEY: Okay. Then let's go to your slides. Exhibit 3-3 and we already talked about inserting the word "untreated" for any freshwater containment. Exhibit 3-4 gives a definition of low chlorides as 15,000 milligrams per liter threshold for low chloride drilling fluids.

THE WITNESS: Right.

CHAIRPERSON BAILEY: Somebody else would be a better person to question about that or are you the best person?

THE WITNESS: Well, I relayed to you where we came up with the number. I referred to we looked at Texas and we looked at Colorado. If you want a different number, and whether that's protective, it would be best addressed. But what I reference is to why we came up with that number and where we get it. The experts would relate that that would be protective. If you had a different number in mind then they could address that.

CHAIRPERSON BAILEY: Okay. Can you talk about process knowledge for determination of the chloride content?

THE WITNESS: Right.

CHAIRPERSON BAILEY: Isn't the test for chlorides in the field a very simple, easy test?

THE WITNESS: Yes, it is. The reason I was thinking process knowledge, the very thing I mentioned where you had a 2 percent KCL in water, you can calculate pretty carefully what that would amount to without testing it. But you are right, it's not a high cost test.

CHAIRPERSON BAILEY: You reference water-based drilling fluids with these tables. What about standards for diesel-based drilling fluids?

THE WITNESS: Are we talking about oil-based fluids?

CHAIRPERSON BAILEY: Yes.

THE WITNESS: I would say -- I mean, the way the rule is written, they wouldn't qualify for that reduction. So I think that's certainly different animal in terms of protective.

CHAIRPERSON BAILEY: So would those standards be the same as what we have in place now?

THE WITNESS: I would presume so.

CHAIRPERSON BAILEY: Those are all the questions I have for you. Mr. Carr, do you have redirect based on the questions that were asked?

MR. CARR: I do not.

CHAIRPERSON BAILEY: Then the witness may be excused. Call your next witness.

MR. CARR: At this time Mr. Feldewert will take over the direct examination and I will be back later.

MR. FELDEWERT: We would call Ed Hasely. Madam Chair, so you are ready, as we go through his testimony, we will be referencing in NMOGA's Exhibit

1 various points throughout his testimony as well as
2 NMOGA's Exhibit No. 5, so we are going to flip back
3 and forth.

ED HASELY

4 after having been first duly sworn under oath,
5 was questioned and testified as follows:

DIRECT EXAMINATION

6 BY MR. FELDEWERT
7 Q. Mr. Hasely, would you tell the Commission
8 by whom are you employed and in what capacity?
9 A. I'm with Energen Resources as a senior
10 environmental engineer.
11 Q. How long have you been a senior
12 environmental engineer with Energen?
13 A. Coming up on five years with Energen
14 Resources.
15 Q. What has been your area of responsibility
16 during that five-year period?
17 A. All aspects of environmental, air, water
18 and waste issues.
19 Q. In terms of location in New Mexico, has
20 your area of responsibility included the San Juan
21 Basin?
22 A. Yes, I have been in Farmington, associated
23 with the San Juan Basin the whole time.

Q. Now, how long have you been with Energen?
A. Five years.
Q. So you have been with Energen five years as an environmental engineer?
A. Yes.
Q. Prior to that before you joined Energen, by whom are you employed?
A. I was with Burlington Resources, which then turned into ConocoPhillips, for ten years.
Q. Was that up in the San Juan Basin?
A. Yes, all in Farmington.
Q. What was your -- maybe I missed it. What was your job responsibility with Burlington and then ConocoPhillips?
A. Environmental specialist, I think was my title. More or less the same as I'm doing now, air, water and waste issues.
Q. Throughout that period of time that we just spoke to, did your job responsibilities include the siting, installation and management of below-grade tanks?
A. Yes, it did.
Q. And is that the topic that you're going to be addressing with the Commission here today?
A. Yes, below-grade tank issues.

Q. Now, what did you do prior to joining Burlington?

A. I was with Phillips Petroleum Company for 15 years in several locations, including the San Juan Basin.

Q. In what other locations were you employed by Phillips?

A. I was in Casper, Wyoming; Lafayette, Louisiana; Borrowsville, Oklahoma; and Farmington, New Mexico.

Q. Were you then in Farmington with Phillips prior to joining Burlington?

A. Yes.

Q. How long were you responsible for the Farmington activities for Phillips during this time frame?

A. With Phillips I was in Farmington for a little over five years.

Q. Did your job responsibilities with Phillips include the siting, installation and management of below-grade tanks?

A. Yes.

Q. Approximately how many years, Mr. Hasely, have you been involved with below-grade tanks in the San Juan Basin?

A. Approximately 20 years.
Q. In addition to your experience with below-grade tanks, do you have any formal education in oil and gas engineering?
A. I have a petroleum and natural gas engineering degree from Penn State University.
Q. In addition to this education, do you have any work experience as a petroleum engineer?
A. Five of my years with Phillips Petroleum was as a production engineer up in Wyoming.
Q. Did you then utilize your engineering background and experience during the succeeding 20 years in your jobs as an environmental engineer and specialist?
A. I would say yes. My knowledge from petroleum and natural gas engineering and my time working as a production engineer helps me at least understand better the equipment and operation that goes on.
Q. Would you please for me quickly turn to what's marked as NMOGA Exhibit No. 4. Do you recognize this, Mr. Hasely?
A. Yes, I do.
Q. Would you identify it for the Commission, please?

A. I was asked to provide a brief resume and this is what I came up with.

Q. Is this an accurate summary of your education and experience?

A. Yes, it is.

MR. FELDEWERT: Madam Chair, I move the admission of Exhibit 4 into evidence.

CHAIRPERSON BAILEY: Objections?

MR. JANTZ: No.

MS. GERHOLT: No.

DR. NEEPER: No objection.

MR. FORT: No objection.

CHAIRPERSON BAILEY: So admitted.

(Note: Exhibit 4 admitted.)

MR. FELDEWERT: At this point, Madam Chair, I tender Mr. Hasely as an expert witness in petroleum engineering and in the siting, installation and management of below-grade tanks used in the oil and gas industry.

CHAIRPERSON BAILEY: He is so qualified.

Q (By Mr. Feldewert) Would you please describe for the Commission, Mr. Hasely, the below-grade tanks and what purpose it actually serves in the oil field?

A. Yes. First and foremost, it's, as in the

name, it's a tank. It's not a pit, it's a vessel. It's a tank. Exact construction is what's set on the surface of the ground and then the other part of the definition is it's below grade so it's located down in an excavation. And the main reason to have it below grade is to allow gravity drainage, like I think Mr. Gantner mentioned. A lot of the wells in the northwest, low pressure, and so draining water off the separators, draining water off of -- water that gets to the produced oil tank, gravity drainage allows that to go not sit in the pipe which causes freezing problems, operational problems. So it's a below-grade tank and it's used to collect and store the water, produced water.

Q. What type of device is gravity-drained into a below-grade tank?

A. Well, the two that stick in my head would be draining water off the tank. Your separator is not 100 percent so you can end up getting a little bit of produced water in your oil tank. Drain that water off to this below-grade tank. So that's a gravity drain. And a similar situation with -- we have environmental skid rails around our compressors that collect fluid, and they can be piped in and gravity drained to a below-grade tank also.

Q. Would you please turn to what's marked as NMOGA Exhibit No. 5, which, Madam Chair, has already been admitted into evidence.

CHAIRPERSON BAILEY: Yes.

Q. Mr. Hasely, using this picture that's been provided, would you please just kind of walk the Commission through what is shown on here with respect to the usage of a below-grade tank, and I guess first start with identifying the picture on here where you see the below-grade tank.

A. Okay. Obviously, in the tank that is sitting down almost at ground level, in the foreground is the below-grade tank that we are talking about. What I just mentioned before about draining water off the oil tank, in the background there, that's above ground, an oil storage tank. You can see the line coming off the right-hand side of that that comes over, and that would be the gravity drainage draining the water off that oil tank.

These other lines that you can see all go to the center of that tank, and there's an enlarged pipe there. They call it a diffuser to dissipate the energy because those lines can discharge into that tank under pressure. So they would come off

the separator. Like the separator water dump, which does have some pressure behind it, would be tied into that. And so the water dump line, a vent valve on the separator, normally called a B valve that sometimes has to vent. We route that to this below-grade tank also.

I'm not exactly sure on all these lines, but as I mentioned before a skid drain from a compressor or a compressor scrubber dump. It also has pressure behind it so that's tied into the diffuser to dissipate the energy and allow the fluids to fall down into that tank. The one line --

Q. Let me stop you here. I have a pointer. Will that help?

A. That would be great.

Q. I will give it to you if you promise not to point to Mr. Jantz.

A. I will try not to. As I discussed, this line here is the one that I was referring to that would drain the water off the oil tank. These other lines that go into this vessel here is what we are calling the gas diffuser, and that's to dissipate the energy, because all these other lines that are tied directly into that may discharge with pressure, and that's to help so it wouldn't blow liquid out of

the tank or anything like that.

This line here, based on what it looks like, I would say it's the liquids removal line. That would have -- that would L right here and go to the bottom of the tank and a water truck driver can grab it, tie into it there and suck the liquids out. These other lines, like I said, the compressor scrubber dump would have an automatic dump on it. As the liquid levels build up it would dump in there.

These are probably coming off the separator, a water dump line and the B valve that I mentioned before. Another possible line that a lot of people tie into the below-grade tank is the swab line. When you are swabbing a well in to remove the liquids, it's safer to swab into an open-top tank than going into an oil storage tank.

You will notice that there's corrugated metal here that's holding the dirt back from the walls of the below-grade tank itself. That's one way it's done. Another way it's done is we just slope the sides of the dirt off to the side. You need a little bit more room, but slope the walls and not have that corrugated metal.

Q. Mr. Hasely, is this a typical setup that

you see in the San Juan Basin?

A. Yes. I see this setup, and then the other setup that I mentioned with the dirt walls along the side instead of the metal.

Q. Can you tell from the picture -- can you give us an idea how big the tank actually is that you see sitting in the ground?

A. I can't tell exactly, but the majority of the tanks are between 90 and 120 barrels. I would guess this one is a 15-foot diameter and four foot deep, which would make it a 120-barrel tank.

Q. What would that translate to in terms of gallons?

A. I can't do it in my head.

Q. Roughly 5,000 gallons?

A. Sounds good.

Q. Why don't we turn to the second page of NMOGA Exhibit 5.

MR. FELDEWERT: Again, Madam Chair, this is admitted into evidence.

Q. I don't think we need to go into great detail since we have seen a picture, but can you start left to right and identify for the Commission how a typical below-grade tank is used in the field in terms of an overall well site project?

A. Okay. Starting on the left, I will try to go through briefly. This line here would be the line coming in from the separator dumping to -- this would be the above-ground oil tank. Briefly mentioned there, that's an earth and berm or a berm to provide secondary containment to the tank. This would be the fence post. So moving over to the oil tank, this line coming off there would be the gravity drainage line from the water, from the oil tank that we talked about earlier. This obviously is the below-grade tank.

These are the other lines that I already discussed that tie into this diffuser or header to dissipate the energy that you can see on the picture.

This one specifically, I think they have marked -- I can't read it without my glasses on -- that's the skid drain from the compressor. So it does not tie into the middle gas diffuser. That would be another gravity drainage line.

Q. Mr. Hasely, in your experience, has there been at times confusion among operators and regulators about what constitutes a below-grade tank?

A. Yes, there's been confusion between

operators, between operators and OCD and internal to my company there's been confusion, yes.

Q. What has the confusion centered around first with respect to the tanks?

A. The main confusion I have run into is if on this side of the location, if that was a hillside or a slope going up like that, and this tank was sitting on top of the ground but right off of that the slope of the hillside goes up, under the existing definition that could be interpreted as that is a below-grade tank when, in fact, it's really a surface tank sitting on top of the ground.

Q. Has there also been a problem at times distinguishing between a below-grade tank and a sump?

A. Yes, there's been lots of discussions on that.

Q. What has been the concern there?

A. Basically do you have a sump or do you have a below-grade tank is the main discussions that I have been in. It's still going on.

Q. Maybe this will help. Let me turn to what's the third page of Exhibit 5, which has not yet been admitted. Mr. Hasely, I want to ask you a little bit about this particular page, the third

page of Exhibit No. 5. Are you aware, Mr. Hasely, that the Division currently has within its rules a definition of below-grade tanks?

A. Yes, I am.

Q. I'm going to represent to you that's actually in another section. It's found in Section 19.15.2.

A. Correct.

Q. Does this particular exhibit here, NMOGA's Exhibit No. 5.3, does it depict the actual language change NMOGA proposes to the existing definition?

A. Yes, it does.

MR. FELDEWERT: Madam Chair, this is one of the initial modifications we filed with respect to the definition of below-grade tank just -- I think initially when the application was filed, we crafted a definition of below-grade tank. We then having gotten comments from various parties, including the OCD. Our first set of proposed modifications include a revision of the existing definition.

So we are not confused, when our first set of modifications was filed, we then took this red line strike-out version as a whole, incorporated it into the modifications. So if we look at Attachment

A, for example, under below-grade tanks it looks like a whole new definition. Now it's just working with the construction that we had. This exhibit actually depicts NMOGA's modifications to the existing definition.

MR. SMITH: Is this then the April 16 modification?

MR. FELDEWERT: This will be the first set of modifications. Yes, that would be the first set of proposed modifications.

Q (By Mr. Feldewert) So Mr. Hasely, just to wrap this up, this Exhibit 5-3 actually sets forth the proposed modification to the existing definition, correct?

A. That's correct.

MR. FELDEWERT: Madam Chair, I move the admission of NMOGA's 5-3.

CHAIRPERSON BAILEY: Any objections?

MS. GERHOLT: No objections.

CHAIRPERSON BAILEY: So admitted.

(Note: Exhibit 5-3 admitted.)

Q. With this out in front of you, Mr. Hasely, would you please explain to the Commission what this language change is designed to do?

A. Okay. The first change, the underlying

part there that talks about with greater than 500-gallon capacity, that ties back into where there was some confusion between what's a sump and what's a below-grade tank. A sump had been identified as less than 500-gallon capacity, so we took it the other way and said if it's over 500-gallon capacity it would be a below-grade tank.

Q. Now, the below-grade tank we saw in the picture was roughly 5,000 gallons; is that correct?

A. Yes, that sounds correct.

Q. So under this proposed language change, the distinction between a below-grade tank and a sump would be based upon 500 gallons, and 500 gallons being the sump and anything greater would be a below-grade tank. If it was less than or equal 500 it would be a sump, correct?

A. Correct.

Q. Is there then a corresponding language change to the definition of sump in the NMOGA's proposed modification?

A. Yes, there is.

Q. So if I keep a hand on Exhibit No. 5 and flip over to what's marked as Exhibit No. 1 and turn to the third page, Attachment A, we see some language changes to proposed definition of sump,

correct?

A. Correct.

Q. And what NMOGA has proposed to add to the definition, again, differentiated from below-grade tank is set forth in this Page 3 of Attachment A?

A. Yes.

Q. Do you believe, Mr. Hasely, that this combined language change will assist operators and regulators to differentiate between a sump and a below-grade tank?

A. Yes, I do.

Q. If I go back to NMOGA's Exhibit No. 5-3, what language here has been proposed by NMOGA for the purposes of differentiating a below-grade tank from a surface tank?

A. The second change in that definition is we struck the words "where a portion of the tank's sidewalls is" and put in "installed within an excavation or burden." And that goes back to my comment where a surface tank sitting next to the location where the natural topography went up on the hillside, if that was a surfacing tank where it wasn't dug down in and set in the excavation, that would make that clear that that's an above-ground tank versus a below-grade tank with the adding of

the words "installed within an excavation."

Q. And based on your experience, do you think that this language change will assist both operators and regulators to differentiate between a below-grade tank and a surface tank?

A. Yes, I do.

Q. Now, I want to now turn back to -- I think we are done with Exhibit No. 5. We are now going to focus on Exhibit No. 1, particularly Attachment 1 to Exhibit No. 1. I want to start first with how NMOGA's proposed changes seek to document below-grade tanks. What is it that these changes seek to do with respect to below-grade tanks in terms of documentation?

A. NMOGA's proposal for below-grade tanks is to go through a registration process instead of an actual permitting process.

Q. What is the reason for seeking to register below-grade tanks rather than permitting them?

A. Mainly it would be a time-saver. We would not have to wait for approval coming back. We would supply all of the information that's necessary and show that we are doing it right and then we could go on and not wait for approval. It should be a simpler process.

Q. So you are still, under your proposed registration, going to provide information to assure that you meet the siting requirements and the design requirements, correct?

A. Yes, that's in here somewhere.

Q. That would be done under a registration process rather than a permitting process?

A. Correct.

Q. If I turn then to Page 4 of NMOGA's Exhibit No. 1, Section 17.8 A, we see "below-grade tank" struck in that provision. Is that for the purposes of again registering rather than permitting the tank?

A. Yes. That sentence is specific to a division-issued permit, so we struck the words "or below-grade tank."

Q. If I look at what has now become 17.8 C on Page 4 of NMOGA Exhibit No. 1 --

CHAIRPERSON BAILEY: If you would, wait just a second.

Q. That then is some specific proposed language that would result in the registration of below-grade tanks with the district office; is that correct?

A. That's correct.

Q. Then if I turn to the next page of this exhibit, Exhibit 5, and I look at 17.9 A, there's some language changes there. What's the end result? How are below-grade tanks registered with the district office?

A. It states in that paragraph that we would still be using the C 144 form, which is the same form that we would be using for permitting temporary pits and such. And it also provides -- I guess in that paragraph it's mainly specific to we will be using the C 144 form which will provide that information.

Q. Okay. I think if you turn to the next page of Exhibit No. 1, which is Page 6 of Attachment A, we then go to the bottom and we have a provision Subsection 3 that deals with below-grade tanks, correct?

A. Yes.

Q. Again, setting forth the requirements for registering below-grade tanks?

A. Correct.

Q. Does it still require that there be a hydrogeologic report to demonstrate compliance with siting requirements?

A. Yes, it does.

Q. And in the process, does it allow registration of standardized plans and designs?

A. Yes. The language towards the bottom of that allows to get a standard design and plans, closure plans, maintenance plans, approved by the OCD and refer to those standard plans instead of submitting them each time.

Q. So is the hope here that you would be able to streamline the process?

A. Yes.

Q. If we then turn to, still within that same section, 17.9 D as in dog, and I believe that's over on Page 8 of Attachment A. We see there in D 2 that term "below-grade tanks" is struck, correct?

A. That's correct.

Q. Again, is that solely for the purpose of being consistent with the fact that below-grade tanks would be registered rather than permitted?

A. Yes, D is filing of permit applications, so if we went with registration it shouldn't be mentioned there.

Q. Okay. If we continue on then we go to the siting requirements for below-grade tanks. What has the language change in 17.10 A 1 done or accomplished?

A. It removed the below-grade tank and that's specific siting criteria associated with the temporary pit.

Q. So rather than having the siting requirements be the same for temporary pits, you have now removed below-grade tanks from the siting requirement. We also put together a new provision for below-grade tanks, correct?

A. That's correct.

Q. So if we turn to the section 17.10 A 4, which is on the next page, Page 10 of Attachment A of NMOGA's Exhibit 1, in that section you set forth the siting requirements for below-grade tanks, correct?

A. Correct, in No. 4.

Q. And would you agree that because of the nature of the vessel that below-grade tanks should have different siting requirements than temporary pits?

A. Yes. I feel that way. As I mentioned in the beginning, it is a tank, it's not an earthen pit. It's the same vessel that sits on top of the ground. It just happens to be in an excavation, so to me there's an added layer of protection there on protecting the environment, therefore justifying

different siting criteria.

Q. Will this afford your company some flexibility in terms of siting below-grade tanks it currently does not have?

A. Yes, it will.

Q. If you then turn to Design and Construction, which is the next section of the rule beginning on Page 13 of NMOGA's Exhibit No. 1, I want to address the fencing provisions which we find towards the middle and bottom of Page 13 of Attachment A. What has NMOGA proposed with respect to below-grade tanks when it comes to the requirements in Section 17-11 D 2?

A. We removed the term "or below-grade tank" in D 2 and that was the D 2 specific to six-foot high chain link security fence with two stands of barbed wire at the top, and we removed below-grade tank from that requirement. There is requirements in 1 or 3 that talks about it does have to be fenced but No. 2 was specific to the security fence.

Q. So just so we are clear here, below-grade tanks still have to have the fencing perimeter around them?

A. That's correct.

Q. And what you eliminated then is the chain

link fence, six-foot with two barbed wire stands on top?

A. Correct.

Q. Deb, could you bring up the picture of the below-grade tank? Would you explain, Mr. Hasely, why you think it's unnecessary to require a six-foot high chain link fence with two barbed wires across the top for every below-grade tank in the San Juan Basin?

A. Basically, a below-grade tank doesn't have the potential hazards to human health and public as a temporary pit would have, a lined pit. Like we said, there is going to be a four-foot fence around this below-grade tank. There's going to be warning signs. The tank is covered -- required to be covered with netting or a mesh. So bottom line, I don't see where there's the hazards associated with the below-grade tank that there could be with a temporary lined pit.

Q. So in your opinion, in your experience, will a fenced below-grade tank like we see here provide a reasonable deterrence for unauthorized access?

A. Yes, it should.

Q. And given the nature of below-grade tanks

and how they are constructed, do you think it would provide a reasonable level of protection to the public?

A. Yes, I do.

Q. If we then turn to the next topic within this section. It's on Section 17.11 I, which begins on Page 17 of Attachment A. If you look towards the bottom of that particular page, the 17.11 I, those are design requirements for below-grade tanks in Paragraphs 1 through 4, correct?

A. That's correct.

Q. I want to turn to the next page and look at Subsection 4 A, which is carried over to the top of Page 18 of NMOGA's Exhibit 1. And you will see that the NMOGA proposes added language "or alarm."

A. Yes.

Q. Would you please explain to the Commission why NMOGA has proposed this alternative control device for below-grade tanks?

A. Yes. We added "or alarm" into this statement about having automatic high level shutoff control device or alarm. And what we mean by an alarm is a call-out system that's going to notify our operator, via text or a phone call, however they set that up. And what that allows us to do is if we

had that alarm set to come on at 75 percent of the tank full, that allows our operator to respond to that, go out and find out if the tank needs pulled, what's going on, does the well need shut in or can we just get a water tank out, pull the tank down and continue operation? So it's a way to allow us to continue operating and not just have it shut in and still protect the environment by notifying our guy and letting him out there.

Once the well gets shut in, it can cause operational problems. If that happens in the wintertime you have freezing problems. A lot of wells in the San Juan Basin, once they are shut in you can't just open up the valve and have them come again. You have to bring in a rig, have a swab rig to remove the liquid and get the rig flowing. So this alarm allows us the operational flexibility to still monitor the level of the tank and get notified before there's a problem and address that and allow the well to continue to operate.

Q. I noticed you mentioned the swabbing issues. Is there also concern that in the wintertime you would have some freezing issues if you just had the automatic shutoff as an option?

A. Yes, that's correct.

Q. So in essence, this gives an operator another option for dealing with and protecting against overflow that may avoid some unnecessary shut-in?

A. Yes, that's the way I feel.

Q. Now I want to turn to the new topic, and that is the provisions of the rule requiring current operators to remove below-grade tanks in the field that does not meet the design requirements of the current rule. And if we turn back to Page 17 of this NMOGA Exhibit No. 1 in dealing with Subsection I involving below-grade tanks, we have Paragraphs 1 through 4 that impose design requirements on newly installed tanks, correct?

A. That's correct.

Q. And NMOGA, other than the change in the alarm that we just talked about, hasn't proposed any changes to the new design requirements?

A. Correct.

Q. Then if we continue over to the next page, we see that NMOGA has proposed some changes to what are Subparagraphs 5 and 6 of this provision of the rule, correct?

A. Yes.

Q. First off, are these the provisions that

address below-grade tanks that are currently in place, but because of their age and time that they were installed do not meet the current design requirements?

A. Yes. These in both 5 and 6 are associated with tanks that do not meet the current design requirements.

MR. FELDEWERT: Madam Chair if I may, in going through this the other day with Mr. Hasely, I found it helpful to have a copy of the existing rule in front of me first to understand what the existing rule requires before we deal with the changes. So if I may, I have additional copies of the pertinent pages of the existing rule that I would like to hand out.

CHAIRPERSON BAILEY: Yes, thank you.

MR. FELDEWERT: If anyone else wants, it's the current rule.

Q. This is comprised of Pages 7 through 10 of the current rule. If you look at Page 7, we see the Subsection I at the bottom. If we turn to the next page, we see Subparagraphs 5 and 6 of the current rule. Mr. Hasely, looking at those two subparagraphs, what is the problem with the way that the current rule, as drafted, treats existing tanks

that do not meet the design requirements for below-grade tanks?

A. The main problem is concerning having to remove a tank that we can demonstrate integrity. The language in 5 and 6 does allow that to remain only if the sidewalls of that tank are visible, so our concern is if we have a below-grade tank that the operator can demonstrate integrity even though the sidewalls are not visible, we feel that tank should be able to be left in place.

Q. So if I look at Subsection 6, I 6 of the current rule on Page 8, is that the provision that apparently says you must remove a tank by a certain period of time if it is single-walled and you cannot see any of the sidewalls?

A. That's correct. That's what No. 6 discusses. We have five years or until June of 2013 to remove those.

Q. And that would apply even if the tank has integrity, correct?

A. Correct.

Q. The way it's currently crafted?

A. That's correct.

Q. Are there ways for operators to demonstrate integrity of below-grade tanks even if

the sidewalls are not open for visual inspection?

A. Yes, there is.

Q. Can you explain those?

A. Some operators have their single-walled tank and they took a heavy duty plastic liner and wrapped that around the tank, sealed it at the top with a band to hold it together and then it has a leak detection pipe that goes into that. So it's essentially building a double-walled tank but the one wall is a liner, actual liner. And then the sidewalls can be covered with soil then and you have this liner wrap around the below-grade tank and you have a pipe that goes down into that angular space between the liner and the bottom of the tank and you can monitor that fluid. So if that main vessel, the tank itself, does have a leak, you will see that in that liner wrapper in the leak detection pipe.

Q. Under the current rule, even if you had that system in place, if your sidewalls aren't open and you have single-wall, do you have to remove it even if you can demonstrate integrity?

A. That's the way it reads, yes.

Q. If I turn to the similar provision found on Page 10 of the current rule, Section 17.13 A 5, under this current language of this rule, it

prevents, does it not, Mr. Hasely, an operator from having a change of operator if that operator has any tanks that don't meet the current design requirements?

A. Correct. I think prior to sale or change of operatorship you had to bring all tanks up to the current design standards.

Q. That would include even tanks for which you could demonstrate the integrity?

A. That's correct.

Q. So are these provisions requiring operators at the current time to incur the cost of removing perfectly good tanks?

A. Yes, it does.

Q. How much does it generally cost to remove an existing below-grade tank and replace it with a new one that meets the design requirements?

A. Well, specifically with Energen Resources, we have not been putting in any more below-grade tanks so we are averaging about $20,000 to take that tank that is below grade and move it above grade, so about $20,000 average.

Q. And for a company like Energen, what budget is impacted by these type of expenses where you are removing a perfectly good tank?

A. Well, I think any time you have any expenses, the bottom line is it goes to our capital budget which includes that.

Q. Knowing the problem, what has NMOGA proposed?

A. NMOGA reworded or added to No. 5, and I'm looking back on Page 18.

Q. Wait for everybody to get to that.

A. We struck No. 6 all together, because we can address that in No. 5. No. 6 was the wording that said if you cannot see the sidewalls of the tank that you have to remove them within five years. So we addressed that issue up in No. 5. Weren't we going to remove language here?

Q. Let me ask you, just at the 30,000 foot level, with the changes on Page 18, what's the end result? What are you proposing?

A. The end result should allow us to leave in a below-grade tank that does not meet the design criteria as long as we have a method to demonstrate integrity. We do our monthly inspections and we can demonstrate it has integrity, so it eliminates us spending money to remove a perfectly good tank.

Q. Then is it up to the operator to ensure that he has the means necessary to demonstrate

integrity?

A. Yes.

Q. If you have a below-grade tank where you cannot demonstrate integrity for one reason or another, do the changes still require that tank be removed?

A. That is correct.

Q. Talk about how we got to that point. First off, you mentioned that you eliminated the language in Subsection 6 on Page 18 which required you to remove those tanks unless they had the sidewalls open for visual inspection.

A. Correct.

Q. And then did you then modify the language in Subsection 5 to allow all existing tanks to remain so long as the operator can demonstrate integrity?

A. That's the intent, yes.

Q. And you believe you accomplished that with the changes made to Subsection 5?

A. I don't think so with the current language I'm looking at.

Q. So where are we then at this point if the operator of a below-grade tank installed prior to the effective date of this amendment has the

sidewalls open for visual inspection? That didn't get us there, did it?

A. That is correct. That language is still up in No. 5.

Q. So after finding that out, did NMOGA then file a second set of proposed modifications?

A. That's what I understand, yes.

Q. And those were the ones that were recently filed. Under the second set of proposed modifications, which I think the Commission has as Exhibit No. 20, did you then on the same Page 18 of the second set of proposed modifications, did NMOGA add an additional modification, and what NMOGA had proposed is to strike the language "and the sidewalls open for visual inspection," correct?

A. Correct.

Q. Okay. With that change then, do these provisions with the filed modifications that we proposed in this provision, would that allow a perfectly good tank to remain in use as long as the operator can continue to demonstrate integrity?

A. That's the way it's worded now, yes. As long as it demonstrates integrity it can remain.

Q. Now, in addition to this language change, because these rules are interrelated, there were

some other corresponding changes that had to be made to the Pit Rule, correct?

A. Yes.

Q. I want to first then turn back to Exhibit No. 1 and we go to Page 37 of Attachment A. That would be Section 17.1. E 4 and 5 on Page 37 of Attachment A. NMOGA proposes to strike those two paragraphs; is that right?

A. Yes, it is.

Q. Again, is the purpose here to allow below-grade tanks to remain as long as the operator can demonstrate integrity?

A. That's correct.

Q. And if these two provisions remain within the rule, that goal cannot be reached, correct?

A. Correct.

Q. And in particular, if I look at Subparagraph 5 of this section on Page 37, this eliminates the provision, one of which we have talked about, where an operator could not transfer its wells if it had a below-grade tank that didn't meet the current design requirement?

A. That's correct. That's what No. 5 talks about, that prior to any sale or change of operator, that we would have to close any tank that doesn't

meet the current requirements.

Q. Even if that tank was perfectly good and you could demonstrate integrity?

A. Yes.

Q. So that's, again, why you struck Subparagraph 5?

A. Yes.

Q. Subparagraph 4 dovetails what you have previously testified to?

A. Yes.

Q. I think one more, Mr. Hasely. In addition to trying to -- in order to meet this goal we recently discovered an additional change that needed to be made, correct?

A. Yes.

Q. If we turn to Page 48 of Attachment A, which for the record is Section 17.16 F, there's some language there about transferring the permit again along the lines that we have previously talked about, change of operators and transferring the permit. There's some language in there, beginning in the second sentence that says, "Except for existing below-grade tanks that do not meet the requirements of Paragraphs 1 through 4 of Section I."

A. Correct.

Q. Again, referencing the design requirements, correct?

A. Yes.

Q. In order to meet our goal of being able to transfer properties that have below-grade tanks that don't meet the design requirements but for which an operator can continue to demonstrate integrity, that language needs to be struck?

A. Yes. I think that's specific to transferring the permit, that we can transfer that permit. If the OCD approves the well transfer, the permit registration of the below-grade tank would go to that without additional paperwork and we should be allowed to leave them in place if they can demonstrate integrity.

Q. That particular language change is then another component of NMOGA's second set of modifications that were filed on May 10th and it's reflected on the corresponding Page 48 of that second set of limitations; is that correct?

A. Yes.

MR. SMITH: Excuse me. Just for clarification, you have in Attachment A on Page 48 language stricken from F, right?

MR. FELDEWERT: Correct.

MR. SMITH: Now, do I understand that that language was not stricken in the April 16 filing but was stricken in the May 2 whatever filing it was?

MR. FELDEWERT: No, to make it hopefully clear -- and it isn't and I apologize. I recognize what happened is NMOGA filed their application for rule change and had their proposed modifications attached to the application. There was then a period of time that went by in which other parties filed suggestions or modifications to the proposed language change. At the end of that process, NMOGA then filed their first set of proposed modifications.

MR. SMITH: April 16th?

MR. FELDEWERT: I would have to check but I believe that's correct. Part of that first set of proposed modifications to their application, the language that you see on Page 48 deletes all of Attachment A, what was included in the first set of proposed modifications.

MR. SMITH: Okay.

MR. FELDEWERT: Then having looked at the rule again for the umpteenth time and finding yet another provision that was inconsistent with some of

the prior changes, that resulted in the filing of the second set of proposed modifications in May, and you will see if you look at Page 48 of the second set of proposed modifications, it maintains the language that was struck at the latter part of this rule to deal with the design requirements. But it strikes the additional language that we just went through and makes sure it remains consistent.

MR. SMITH: That's where I am confused. I apologize.

MR. FELDEWERT: Mr. Smith, the way it was differentiated is on the second set of proposed modifications, all of those modifications were identified in the comments to the side.

MR. SMITH: I'm looking at what you all filed on May -- I guess it's May 10th.

MR. FELDEWERT: Yes. If I go to the very last page --

MR. SMITH: But that's not Page 48, right? That's Page 25.

MR. FELDEWERT: It should be Page 48.

MR. SMITH: No, I am looking at what was actually filed. Is what was actually filed different from Exhibit 20?

MR. FELDEWERT: Can I take a look at what

you're looking at?

MR. SMITH: Got it.

MR. FELDEWERT: Does that answer your question?

MR. SMITH: Yes.

CHAIRPERSON BAILEY: Let's take a ten-minute break.

(Note: The hearing stood in recess at 2:40 to 2:52.)

CHAIRPERSON BAILEY: We will go back in the record. We have had requests for witnesses and attorneys and commissioners to speak up so that the people in the back can hear what's being said here at the front of the room. So if we would all keep in mind that we need to speak up.

MS. FOSTER: It was recommended that I put something on the record concerning the fact that the IPANM's petition is under a different case number than the NMOGA modifications. However, the modifications that I have filed up until this point have been almost identical to the NMOGA modifications, except for a few little tweaks. So in my presentation under my case number, what I am intending to do and asking the Commission for is I would like to adopt all of the testimony that NMOGA

is presenting today and then I will present just two of my witnesses to talk about the differences that we have in those few little minor items.

So again, I want to make sure that the record is clear because we had a question earlier about different case numbers and adopting the record and all that. So I hope that we will be able to do that in this case and I just spoke to counsel about that.

MR. SMITH: I think that's fine, but I think they will have to adopt the entire record, the OGAP witnesses and cross and so forth, not just --

MS. FOSTER: Yes, thank you for the clarification. That's correct. I would adopt the entire record from the case number that ends in 84. That is the NMOGA case, and then the IPANM witnesses would layer on top of that under my case number, which ends in 85.

CHAIRPERSON BAILEY: That may speed this along.

MS. FOSTER: Yes, hopefully.

MR. SMITH: To make it clear on the record, it is a contemporaneous case with virtually the same changes.

CHAIRPERSON BAILEY: Thank you. If you

would like to continue with your witness.

MR. FELDEWERT: I would, please.

Q (By Mr. Feldewert) I just want to then wrap this up, this particular part, Mr. Hasely. Under these changes that we just kind of painstakingly walked through dealing with the integrity of below-grade tanks, under NMOGA's changes, if there is an existing tank that does not meet the design requirements, an operator cannot demonstrate the integrity of the tank, what happens under NMOGA's proposed amendments?

A. That does not change. If we cannot demonstrate integrity it must be closed and removed.

Q. If it can demonstrate integrity under NMOGA's modifications, it can remain as long as the operator can demonstrate integrity?

A. That is correct.

Q. Based on your experience, Mr. Hasely, if an operator can demonstrate that a below-grade tank maintains integrity, is there any reason to incur the cost of removing the tank?

A. No. Unnecessary cost.

Q. Does the tank that continues to maintain integrity provide a reasonable level of protection to the groundwater and the environment?

A. Yes, it does.

Q. I want to now then turn to the operational provisions of the rule, which is 17.12 D which begins on Page 23. I'm sorry, 22 of NMOGA's Exhibit No. 1 in Attachment A. I want to address the change to Paragraph D, which begins over on bottom of Page 23. What we want to focus on is D 3 which carries over to Page 24, okay?

A. Okay.

Q. So again, we are dealing with a provision that specifically addresses below-grade tanks?

A. Yes.

Q. NMOGA has proposed to add language that an operator shall inspect the tank for leakage. Do you see that?

A. Yes, I do.

Q. Now, the Oil Conservation Division in their comments and modifications to what NMOGA has proposed has suggested that the operator inspect the below-grade tank for leakage and added the phrase "and damage." Do you recall that?

A. Yes, I do.

Q. Do you agree that makes sense here?

A. Yes, I think that's what we would be doing.

Q. Then if we continue on in the changes, there is a requirement that they maintain a written record of the integrity test. Do you see that?

A. Yes.

Q. And going through this and reviewing this with me, you made a comment about the problem with the word "test." Can you please explain to the Commission what that is?

A. Yes. And it's really just that it can be confusing when we use the word "integrity test." A lot of times people assume a test is a pressure test or something like that. We are demonstrating the integrity by visual or other means, and I didn't want that to get confused with an integrity test. You obviously can't pressure up on a below-grade tank that's open-top. It's not going to hold pressure obviously. So the word "test" was confusing to me and we are demonstrating integrity but it's not necessarily a test.

Q. So then on May 10th NMOGA, as part of their second set of modifications that had been filed with the Division, has proposed to take out the term "test," correct?

A. Yes.

Q. But nonetheless, the operator must still

demonstrate the integrity of the tank by some means?

A. That is correct.

Q. Then if we move on to Subparagraph D 5 on Page 24 of Attachment A, NMOGA again took out the reference to the design requirements that exist within the current rule, correct?

A. That's correct. We figured this should apply to all below-grade tanks, not just below-grade tanks that do not meet the requirements.

Q. So this particular provision deals with repairing?

A. Yes.

Q. What you saw was that as read, it could technically be read to just include only tanks that meet the design requirements, right?

A. The way it read, it would only apply to the ones that did not meet the design requirements.

Q. I'm sorry.

A. And we are saying, you know, obviously any below-grade tank that doesn't meet integrity, we should address it.

Q. And then NMOGA's proposing adding language in that paragraph "repair the damage or close." Do you see that?

A. Yes, I do.

Q. What's the purpose of that?

A. What we were thinking there is -- and looking at northwest anyway, bullet holes. We can have a perfectly good steel tank. There can be a bullet hole in the side. The way it read before we would have to replace the tank or close the tank. If we can adequately repair that tank and demonstrate integrity, we wanted that option.

Q. And then NMOGA is proposing to strike the last portion of Paragraph 5 on Exhibit 24 of Exhibit 1 which begins with "and install a below-grade tank." Do you see that?

A. Yes, I do.

Q. What's the purpose of the language change?

A. The reason there is the operator may not want to install another below-grade tank. As I mentioned before, Energen a lot of times is closing the tank and putting a surface tank in. So the important part is it's going to be closed and then what we replace it with should be up to our office.

Q. In Subparagraph 6 on Page 24 there are changes. First off, again, we struck the reference to the design requirements. Why is that?

A. That we looked at as just redundant language, because this No. 6 talks about

retrofitting an existing tank to comply, so we struck the wordage or verbiage that it does not meet the requirements, because if it met the requirements we obviously wouldn't be retrofitting the tank.

Q. Then if I go down to the latter half of Subparagraph 6, it looks like there are some striking of some language here. What is the purpose of this language change? What is being accomplished here?

A. The main part there is to reference you back to the Table 1 that Mr. Gantner went over with the limits in Table 1 so it references back to Table 1.

Q. Mr. Carr in his opening was pointing out the fact that a lot of language changes were necessitated by using the tables and allowed the rule to actually be shortened by referencing the table rather than putting a lot of language like you see in Subparagraph 6. Is this one of those circumstances where the language is bringing the table into play here with the below-grade tanks?

A. Yes, it is.

Q. Okay. And I believe finally I want to turn to the Section 17-13, Closure Provisions. And what I want to address with you, Mr. Hasely, is the

time frame for closing below-grade tanks that are no longer in use. I believe those are found on Page 37 of Exhibit No. 1. Just to orient the record, that would be -- if I look at Page 36 of Attachment A, you will see 17.13, what is now the new E, the timing requirements for closure there at the bottom. That carries in from Page 37. If we look at Subparagraph 7 of this Page, Page 37 on Exhibit No. 1, that deals with below-grade tanks should be closed, correct?

A. Yes, it does.

Q. Now, first off, you will see that it starts off with an operator shall close a permitted below-grade tank, again, six months. Do you see that?

A. Yes.

Q. Now, the Oil Conservation Division has proposed that the language change here be such that an operator shall close a permitted or registered below-grade tank. Is that consistent with what NMOGA is proposing?

A. Yes, that covers the old and the new.

Q. Okay. Because you may have an older below-grade tank that was permitted and then under these new provisions that they are adopting we would

have below-grade tanks that would be registered.

A. That's correct.

Q. All right. Second change here is that the time period for closing a below-grade tank is modified from 60 days to six months. Do you see that?

A. Yes, I do.

Q. Would you please explain to the Commission why NMOGA is proposing this additional time period?

A. That gives the operators additional flexibility on closing. As we talked before, a temporary pit is allowed to be open for six months and we didn't understand why a below-grade tank that has that additional protection and everything had a shorter time frame. So we extended the time frame to close the below-grade tank up to match the temporary pits.

Q. Because of equipment availability, et cetera, is it difficult at times to meet a 60-day removal and closure requirement for below-grade tanks?

A. It forces you to move pretty quick at times, depending on the availability and another tank being ready, yes.

Q. Is there a certain scenario where you

would run into closure concerns for example that could prevent this type of work?

A. Yes, that could come into play here just like with the pits.

Q. Mr. Hasely, you testified that you have been in charge of installing, maintaining and dealing with below-grade tanks in the San Juan Basin for almost 20 years, correct?

A. Yes.

Q. Drawing upon that experience, in your opinion will NMOGA's proposed modifications dealing with below-grade tanks still afford a reasonable level of protection of groundwater and to the environment and public health?

A. Yes, I believe that.

Q. And based on your experience, will the proposed changes that we just reviewed allow Energen and other oil and gas operators in New Mexico to more efficiently and economically produce oil and gas?

A. Yes, I do.

Q. That concludes my examination of this witness.

CHAIRPERSON BAILEY: Ms. Foster, would you like to cross-examine the witness?

MS. FOSTER: I would. Thank you.

CROSS-EXAMINATION

BY MS. FOSTER

Q. Good afternoon, Mr. Hasely.

A. Good afternoon.

Q. Just a few quick questions. Looking at the OCD recommendations to Section 19.15.17.12 D 6, I believe it is?

A. Can you give me a page number to speed it up?

Q. I'm looking at the OCD page numbers so it's different. Might be 21.

A. Could you give me the number again?

MS. GERHOLT: Page 24.

Q. That section talks about specifically a below-grade tank and inspection, visual inspection of the area beneath the below-grade tank during retrofit.

A. Yes.

Q. The OCD made a recommendation that if the operator discovers wet or discolored soils then you shall automatically implement the action pursuant to Rule 19.15.30. Do you see that?

A. I don't know if I'm looking at the right -- are you looking at the OCD's recommended

changes?

Q. Yes.

A. I don't have that that I'm aware of.

Q. So the OCD did their changes and comments on the side. Do you have to use your reading glasses?

A. Yes, I do. Okay. I'm there.

Q. So are you familiar with what rule 19.15.30 is?

A. Yes, I am.

Q. And what rule is that?

A. It's mainly for groundwater abatement.

Q. And under the abatement plan, is there any sort of a minimum volume or testing requirement required before you put yourself into an abatement plan?

A. I guess I'm not well enough versed to answer that.

MS. GERHOLT: Excuse me, Madam Chair. If I may interject a moment, the OCD will be providing evidence but the OCD did make a mistake and it's supposed to reference Rule 29 and not Rule 30 and we will provide evidence of that but I wanted to provide you with that clarification now.

Q. Are you familiar with Rule 29, the spill

rule?

A. Yes.

Q. Are there minimum volume or testing requirements in this spill rule?

A. Yes.

Q. Do you know what those requirements are?

A. There are certain levels in there that if your soils pass that level then you do not have a spill or you do not have remediation concerns.

Q. So what the OCD is recommending, though, here, however, is that if there's wet or discolored soil. Would that normally push you into a rule situation?

A. No.

Q. So this is the changing the requirements for the spill rule requirements?

A. That's the way I would see it, because a wet spot shouldn't drive you into the spill guidelines.

Q. Normally when an operator finds a wet spot on location, what would you normally do?

A. Test the soils and see what it is, see if it's a concern.

Q. Thank you. I have no further questions of the witness. Thank you.

CHAIRPERSON BAILEY: Mr. Jantz?

CROSS-EXAMINATION

BY MR. JANTZ

Q. I want to start off on Page 23, Section 12 B 3. "Operator shall file a copy of inspection log to the appropriate division district office when the operator" -- I'm sorry, let me retract that. That's probably not for you since you are talking about tanks.

A. Not me.

Q. Okay. So in your direct testimony you talked about the fluids that generally go into these tanks and you talked about fluids from the oil separator. You pointed that out on the slide, right?

A. Yes.

Q. You said it was produced water?

A. Normally.

Q. What's in produced water generally?

A. Some of it can be pretty fresh. It can have some higher chlorides.

Q. Just generally chlorides? Hydrocarbons?

A. It can have some hydrocarbons.

Q. And it's going to have other organic or inorganic compounds? Solvents?

A. It could get into the produced water if it went through some system that had that chemical, yeah.

Q. Other sorts of constituents that you might found in the ground? Arsenic? That's something that you wouldn't encounter in the drilling process?

A. I'm not aware of that.

Q. We will leave it at that. You also said fluids from -- I think it was environmental skids? Was that the word you used?

A. Around our compressors, yes.

Q. Yeah, what --

A. Environmental rail.

Q. Environmental rail. So what is the water from the environmental rail or the fluids from the environmental rail? What's in that generally?

A. Storm water, rainwater obviously, and anything that could drip off of the compressor.

Q. So it's additional stuff like hydrocarbons?

A. They could have hydrocarbons, yes.

Q. So the contents of a tank are often, unless I'm wrong, the same or similar to what's in a pit; is that correct?

A. Produced water usually does not go to a

temporary pit anyway.

Q. Aside from the temporary pit, the same constituents? Hydrocarbons, chlorides, what have you?

A. Yes.

Q. That stuff, would you agree, it's probably generally not a good idea to get to the freshwater, groundwater?

A. I would agree with that.

Q. Further on in your direct testimony, you talked about some of the operators who used leak detection when the sidewalls weren't visible. You mentioned a liner with a tube stuck in it?

A. Yes.

Q. Are there any other leak detection methods that operators use?

A. Other than the visual?

Q. Yeah. So we have visual and that's generally only --

A. Sidewalls.

Q. -- where the sidewalls are visible?

A. Correct.

Q. And then when the sidewalls aren't visible you have these liner leak detection systems. Are there any others? Any other ways that an operator

can demonstrate integrity?

A. There may be, but I cannot think of an example. Double-walled -- obviously a double-walled tank.

Q. Sure.

A. But I can't think of anything offhand but I won't say there isn't.

Q. But you are not familiar with it?

A. Correct.

Q. Okay. So going to the leak detection system with the liner, doesn't that assume that the liner is properly installed and that there aren't any rips or tears in the liner?

A. Yes. That assumption would have to be there.

Q. If there were a leak or tear in the liner, then the leak detection system probably wouldn't work?

A. That's correct.

Q. So how long are these tanks usually used in your experience?

A. I don't know if I have an answer. If it's demonstrating integrity, I guess it could be the life of the well.

Q. How long is that?

A. A well could produce 20, 30 years.

Q. So it could be a 20, 30-year tank. Assume you have a below-grade tank that has a liner leak detection system. There's a rip in the center of that and you also have a leak in the center of the tank itself. Am I right that that would be hard to detect? That would be a difficult thing to detect because you don't have the benefit of the visual inspection?

A. Unless it was a significant or larger leak you would obviously see it would not hold fluid.

Q. Sure.

A. But if you had a small leak in the tank and a leak in the liner, yes, you would not notice that.

Q. Generally what do operators use to protect their tanks from corrosion? I'm assuming these are metal tanks, right?

A. A lot are metal and a lot are fiberglass.

Q. How do you protect them from corrosion?

A. On the metal -- obviously you don't have to on the fiberglass.

Q. Sure.

A. Metal tanks, I don't know if I can answer that. I don't know enough about cathodic protection

and stuff to speak intelligently on it.

Q. And let me ask one last question. As the rationale for the closure requirements being moved from 60 days to six months, you said you wanted to put it in a line with temporary pits.

A. Well, it made sense to me. I didn't understand why there will be a quicker time frame to close the below-grade tank that obviously has good protection, why we would have to close that in a quicker time frame than a temporary pit.

Q. So is it NMOGA's position now that tanks will be closed within a year? Because you are advocating for closure of pits within a year rather than the six months.

A. I don't know. Ask that again, please.

Q. NMOGA is asking in its proposed modifications to the Pit Rule that the time for closure for pits, temporary pits, be extended from six months to a year.

A. Okay.

Q. Are you advocating the same for tanks to keep the two in line?

A. No, I don't -- I would think six months gives everybody enough time to not rush around too bad and we would be able to close the below-grade

tank in six months.

Q. During that six months are there going to be fluids in the tank or no?

A. There could be. There shouldn't be if we remove it from service. Depending on what we are doing with the well location we would suck it out. But if the well is operating we're going to have an operator there and we would have it removed -- have the fluid removed.

Q. Actually, one more thing occurred to me. You talked about adding the provision for an alarm --

A. Yes.

Q. -- to notify an operator that there's an overflow or close to an overflow; that the tank is reaching capacity. There's nothing in the regulations, is there, that I may have missed that specifies the type of alarm system that you referred to, one that would notify an operator by text or E-mail or telephone call?

A. No. I think the only wording in there is "or alarm." So that's correct.

Q. So that could be like a bell on the tank itself.

A. Right. That was my original thought, too,

and I said that's not going to work. There may be need for a wording change there to a call-out system.

Q. Thank you. I appreciate that. That's all I have.

CHAIRPERSON BAILEY: Okay. Ms. Gerholt?

CROSS-EXAMINATION

BY MS. GERHOLT

Q. As a follow-up to the last question, do you believe NMOGA would be willing to submit additional language to clarify "or alarm" so there's not confusion for any operator or the division that it might be a fire alarm bell? That it could be more specific?

A. I would say think so, because I brought that concern up and they said no, we mean a call-out system, so I would think we would be open to submit more wording changes.

MR. CARR: Thank you. No further questions.

CHAIRPERSON BAILEY: Is Mr. Bruce here? Okay. Mr. Dangler?

CROSS-EXAMINATION

BY MR. DANGLER

Q. Apparently we are all interested in the

alarm because I have the same issue. Is there any opposition to some required response time? Because one of the things that concerned me in the frontier area, if you don't have a crew out there, how fast can you get out there? I mean, what I think you said is in my mind can still monitor before there's a problem, but the alarm is kind of telling you there is a problem. Can we limit the damage under an alarm system?

A. I think -- and I don't know about wording -- verbiage or anything -- but an operator should set the alarm maybe even at half full. You have half full and you have to respond. The operator should also know how much fluid normally goes to that tank or pit, but like I said, I don't know about verbiage. But yes, we should have something that whether we set it up that way or there's verbiage that we can respond adequately before any chance of overflow.

MR. DANGLER: Thank you. No further questions.

CHAIRPERSON BAILEY: Dr. Neeper?

CROSS-EXAMINATION

BY MR. NEEPER

Q. Just a few questions. I can do it from

here. I'm returning to this still, to me, unclear question of sump versus tank. I understand -- am I correct in understanding a sump requires no netting? It has only an annual inspection and it's supposedly to be empty most of the time and if something goes into it the operator should empty that out at his earliest convenience? Is that the notion of a sump?

A. I'm not sure. I thought all open-top vessels had to have some sort of netting or screen across it whether it's sump or not. I'm not positive of that. But what you said in addition to that is correct.

Q. All right. I will pose a hypothetical situation because if I describe the situation, I would be giving testimony and I can't do that. Let us suppose instead of your 15-foot diameter tank that you showed there was something that looks like a tank that's five feet in diameter or a little less perhaps, is also subsurface, maybe also covered with a steel mesh, has pipes leading to it, fluid in it, has the pipes even coming out of it that an operator can hook onto and suck the fluid out of it, but it's less than 500 gallons. It may contain a fluid that looks greenish.

Now, is there anything in the rule that

addresses this as a routine operation? Doesn't sound like a sump to me.

A. No, and I agree with what you are saying. That specific scenario is not addressed in this rule.

Q. So would the rule be improved and even more clear for operators if we did not define a tank as being limited by 500 gallons but instead by how it is used? That is, routinely collecting liquids until emptied, something with an alarm and it's below grade? If we just didn't do it by size, would that be acceptable?

A. I can't speak for everybody, but to me that would help address that gap that we have now that does not address that specific tank.

Q. Thank you. In terms of the fluids that go into tanks, I understood at some point that fluids from dryers and dehydrators could go into tanks; is that correct?

A. Yes. I'm not familiar with the dryers. We used to have dehydes up in the San Juan Basin.

Q. Would those fluids contain things like Glycol?

A. There's a possibility with a dehyde that has Glycol in it if there was a leak of some sort

that you could have Glycol carry over to the tank, yes.

Q. The closure conditions on a wet spot under a tank currently are given by Table 1, I believe.

A. Yes.

Q. And Table 1 has as one of its major conditions a chloride condition. And it has some hydrocarbons but it does not, for example, have other chemicals like Glycol; is that correct?

A. That's correct, Table 1.

Q. So would it be possible that you would find a wet spot under a tank caused by something like a Glycol leak and it could be a very large leak, let us say, but it certainly then would not violate Table 1 in the soil under the tank? Is that possible?

A. I'm not familiar enough with the contents of Glycol, whether that would show up on any of the other analysis. I do not know.

Q. Would any other chemical that's not either a hydrocarbon or chloride show up?

A. I would guess not since those are not the parameters we are testing for.

Q. No further questions. Thank you.

CHAIRPERSON BAILEY: Mr. Fort?

CROSS-EXAMINATION

BY MR. FORT

Q. Mr. Hasely, I understood from your testimony when you all had removed the below-grade tanks, you put them and made them above-ground tanks; is that correct?

A. That's correct.

Q. Why was that? I would assume that you would have dug out around them?

A. The cost issue of making them meet these requirements with the automatic shutoffs and all of that, my company decided to put them above ground and just stay away from the below-grade tanks. It does cause other operational problems since we now do not have gravity drainage, but we are addressing them on an individual basis.

Q. Do you find the rules, the current rules regarding below-grade tanks to be confusing?

A. The current rules? Yes.

Q. Why is that?

A. Well, a lot of it was how it was written without the tables and trying to figure out what -- you had to read paragraphs to figure out what you needed to test for and how to follow it.

Q. Do you find the material redundant?

A. There was a lot of redundancy before, yes.

Q. Is that part of the problem about covering everything as we went through? You would find something in another paragraph that --

A. Yeah, we found a lot of that.

Q. Thank you. No further questions.

EXAMINATION BY THE COMMISSION

CHAIRPERSON BAILEY: Mr. Bloom, questions?

COMMISSIONER BLOOM: Back again to what Mr. Fort was talking about, below-grade tanks, above-grade tanks. If these changes were adopted would you move back to below-ground tanks? Would they be affordable?

THE WITNESS: We would not put in any new below-grade tanks.

COMMISSIONER BLOOM: How come?

THE WITNESS: Mainly the cost of the automatic shut-off control devise or call-out alarm. I won't say we wouldn't, but the scenarios that we have, we have tanks that may see one barrel a week get discharged to it. To spend 7- to $12,000 to put an automatic alarm or shutoff, my management won't justify that.

COMMISSIONER BLOOM: Some of the distances out in the oil field are pretty considerable. Do

you feel that the alarms give you enough time to get out should there be an emergency?

THE WITNESS: Yes, depending on how you set it. Like I said, you should know about how much fluid that well makes and you can set your alarm or call-out to trigger it to give you enough time to respond.

COMMISSIONER BLOOM: Will those alarms show the rate at which the tank is filling or just let you know --

THE WITNESS: I think it just lets you know that it's reaching a certain level.

COMMISSIONER BLOOM: The above-ground tanks that you are using to replace the below-grade tanks, do they have alarms or shut-offs?

THE WITNESS: No, sir.

COMMISSIONER BLOOM: You generally gave us the 30,000 foot overview and I appreciate that. That's so you can leave the tanks in the ground until they are no longer -- until they lose integrity?

THE WITNESS: No longer demonstrating integrity.

COMMISSIONER BLOOM: No longer demonstrating integrity. So you suggest not

requiring these below-grade tank to be removed at sale or transfer?

THE WITNESS: My feelings are if you have a tank you can demonstrate has integrity that you are throwing money away to remove a perfectly good tank.

COMMISSIONER BLOOM: So rather than regulate it, the owner would do the due diligence and go out and inspect that tank?

THE WITNESS: Yes.

COMMISSIONER BLOOM: Lastly, Page 10 of Attachment A we see where -- and I think this permeates the proposed modifications here. We see decreases in distances between pits and tanks and water. 4 A at the bottom says, "An operator shall not locate a below-grade tank within 100 feet of a continuously flowing watercourse or any other significant watercourse or lakebed, sinkhole or playa lake." We don't have a tremendous amount of sinkholes in New Mexico, but would you put a below-grade tank 100 feet, 33 yards from a sinkhole?

A. I have never dealt at all with a sinkhole so I don't know if I can answer that. I have seen some pictures and they were pretty big.

COMMISSIONER BLOOM: No further questions.

Thank you.

CHAIRPERSON BAILEY: Mr. Balch?

COMMISSIONER BALCH: I have a couple mostly follow-ups. The cross-examination answered most of my questions. Following up Dr. Neeper, can you perceive any reason why you would not define a below-grade tank and a sump by their use rather than their size? Is there any reason to have a 50-gallon tank and a 2,000 gallon or a 20,000 gallon sump?

THE WITNESS: Well, no, I don't see that. But I do see some concern on the use. You know, when you define something predominantly empty, de minimis, those are not defined terms so there still could be some confusion.

COMMISSIONER BALCH: You don't think there's an accurate cause for confusion just by having a set size based on the vessel, and based on that size you end up with a definition of what its purpose is?

THE WITNESS: Similar to what we just talked about there?

COMMISSIONER BALCH: Right.

THE WITNESS: Yes, sir. There's obviously a gap the way everything is worded right now. I don't have a solution in my head right now on how

to -- but there is a gap.

COMMISSIONER BALCH: Going to the issue of tank registration, I think I got from your testimony that there would be a standard plan for tank permitting and closure essentially that would be on file on any tanks that would be registered and use one of those existing plans?

THE WITNESS: Yes, that's an option that an operator would have.

COMMISSIONER BALCH: What current OCD form would be used to register the tanks?

THE WITNESS: We have been using the C 144 and then we attach a lot of pages to that to back up everything that's in there, including closure plans, operational plans.

COMMISSIONER BALCH: If you were to go to a registration scenario instead, would you still fill out a complete C 144 for each tank or simply register from a list?

THE WITNESS: I was hoping there would be a list but the verbiage in here says we will still use the C 144 for registration.

COMMISSIONER BALCH: It would just not have the regulatory oversight of having to review the form?

THE WITNESS: Right.

COMMISSIONER BALCH: If there was already a tank site plan and a closure plan in place?

THE WITNESS: Right. You should be able to reference that on the C 144.

COMMISSIONER BALCH: On grandfathering a below-grade tank that do not meet the new criteria from 2008, your testimony was that there would be monthly inspections and annual integrity demonstrations, not tests, right?

THE WITNESS: Correct.

COMMISSIONER BALCH: How would you go about doing the annual -- how would you propose going about doing a monthly inspection and the annual demonstration?

THE WITNESS: To me, the monthly inspection and the annual demonstration are the same thing. I think what it states in here, we're going to document it on an annual basis, but we are going to be inspecting no leakage and damage and integrity on a monthly basis, and then what's proposed is to document that annually. We do that similar with like SPCC inspections where we do our inspections and once a year we document an inspection.

COMMISSIONER BALCH: All right. So this

documentation, is that primarily going to be kept in-house or would it also be filed with the Division?

THE WITNESS: I'm not sure what's required in here. I don't know.

COMMISSIONER BALCH: It's unclear to me whether the proof would be promulgated to the Division.

THE WITNESS: I don't think there was anything in here that said we had to submit it to you on an ongoing basis. I don't know during a closure whether there's a requirement to submit it or not. I don't know. I think we had to hold the records for five years, so thinking out loud, I think there's not a requirement to submit that to OCD unless requested.

COMMISSIONER BALCH: At some point in the process they would have to demonstrate that the tank had integrity to the OCD before there was closure, even under the modified rule?

THE WITNESS: Right. If we, during monthly inspection or the annual inspection that we are documenting, any time during the year if we find that it does not demonstrate integrity we have to take action and close.

COMMISSIONER BALCH: I believe that's all.

CHAIRPERSON BAILEY: All of mine were taken up. Do you have any redirect?

MR. FELDEWERT: I have one redirect. I think it stems out of apparently some confusion here between closure requirements for temporary pits and below-grade tanks.

REDIRECT EXAMINATION

BY MR. FELDEWERT

Q. Mr. Hasely, would you look at Page 37 of NMOGA's Exhibit No. 1.

A. Okay.

Q. Which again is Section 17.13E of the proposed provisions. Over here on E 7.

A. Yes.

Q. It deals with, as you pointed out, close a permitted below-grade tank within six months of cessation of the operation; is that correct?

A. That's correct.

Q. Now, I want you to go up to Subparagraph 5, two above it, okay?

A. Okay.

Q. And it requires, did it not, continues to require that an operator shall close any permitted temporary tank within six months from the date that

the operator releases the drilling and work order.

A. That's what I see in that first sentence.

Q. That's a temporary pit, permitted temporary pit, correct?

A. Yes.

Q. So the time frames in terms of closure under NMOGA's proposed modification, they maintained the closure time frame for permitted temporary pits as they are now, correct? They haven't changed that?

A. That's what it shows in No. 5, yes.

Q. The only thing that changed is they changed the time frame -- what we are proposing is they change the time frame for permanent below-grade tanks to match what it is for temporary pits currently in the rule?

A. To move it to six months.

Q. Okay. We are not -- NMOGA is not changing and proposing a modification where temporary pits would -- that you would have a year to close temporary pits. This says you would do it in six months, correct?

A. That's what it says in 5 and I'm not familiar with the rest of it as far as temporary pits.

MR. FELDEWERT: That's all.

CHAIRPERSON BAILEY: Your witness may be excused. You may call your next witness.

MR. FELDEWERT: Myke Lane.

MICHAEL LANE

after having been first duly sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. FELDEWERT

Q. Mr. Lane, would you please identify for the Commission your employer and explain your current job responsibilities?

A. I'm currently employed with WPX Energy, formerly Williams Production. I'm the EHS, environmental health and safety supervisor for the San Juan Basin operations.

Q. And you mentioned that WPX was recently spun off of Williams Companies, correct?

A. Correct. It spun off from the Williams Companies. It was the production business unit.

Q. Okay. Did your job responsibilities change as a result of this corporate structural change?

A. No, it does not.

Q. Then how long have you held your position

as a senior EHS specialist for Williams in the San Juan Basin?

A. I joined Williams in 2002, initially on the midstream operation side and then transferred over to the production side in December of '04, January of '05.

Q. Do you deal with environmental and regulatory compliance issues?

A. I do.

Q. And permitting for waste management systems?

A. Permitting waste management systems, all of the typical environmental issues, including air, waste and water issues.

Q. Now, what topic will you be addressing with the Commission here today?

A. It will be the multi-well fluid management pits.

Q. Did you assist in drafting the provisions that deal with multi-well fluid management pits?

A. I did. I assisted in authoring most of the provision.

Q. Let's talk a little bit more about your background. Have your responsibilities since Williams included the design, installation and

management of oil field waste management systems?

A. It has, including discharge permits and permitting for pits and below-grade tanks.

Q. What did you do prior to joining Williams in 2002?

A. I was a consulting and principal engineer with two environmental firms in the San Juan Basin from 1990 until 2002.

Q. Which two firms were they?

A. Envirotech from roughly '90 through 2004 and then subsequent to that OnSite Technologies, later Souder Miller right before I left.

Q. Was this principally in the Farmington area?

A. It was all in the Four Corners area.

Q. Were you an environmental engineer with these companies?

A. I was. I was actually the principal engineer with both firms.

Q. And did your -- you mentioned those were consulting companies, correct?

A. Correct.

Q. Did those consulting services in the San Juan Basin since 1990 include the siting design, installation and management of oil field waste

systems?

A. It did. In Envirotech I was involved in the permitting of their land farms as well as managing modifications to the Pit Rule. In 1992 I was involved in managing the assessment projects for numerous operators and the permitting of pits up there.

Q. Have you had experience with oil field waste management systems in other states?

A. I have. I have done some permitting up in Colorado, also Utah, a little bit in Arizona.

Q. Have you had any experience in California?

A. I have, mostly with underground storage tanks. There prior to moving to the Four Corners I was with a Geotechnical Earth Systems firm that looked predominantly at underground storage tanks and management of waste and the assessment of groundwater and all of that. And prior to that I was a development engineer with Shell Oil for five years.

Q. Let's talk then about that period prior to your consulting work in 1990. Can you summarize that for us?

A. Prior to 1990, I graduated college in '82 from New Mexico Tech and went to work for Shell Oil,

worked for them as a petrophysical and development engineer in the Bakersfield area roughly from -- let's see. '83 is when they hired me through '88. Then I went to work for Earth Systems. At Earth Systems I was a consulting -- technically a geological engineer but an engineer focusing on hydrology soils and geotechnical work along with underground storage tanks.

Q. You mentioned that you got your degree in geological engineering from New Mexico Tech in 1982.

A. That's when I graduated.

Q. Was there any particular emphasis?

A. My degree was geological engineering. It was a bachelor's and I emphasized mining and petroleum, actually worked at Petroleum Recovery Research Center as an undergrad.

Q. Throughout your career have you also taken courses in topics related to oil and gas waste management?

A. I have. I have gone to additional training on everything from solid waste management, landfill design, environmental management, risk management, hydrogeologic training.

Q. Are you a member of any professional organizations?

A. I am currently a member of the Society of Petroleum Engineers and the American Society of Safety Engineers.

Q. How long have you been a member of the Society of Petroleum Engineers?

A. Since I was in college, so roughly 30 years.

Q. Do you hold any professional certifications?

A. I'm a registered professional engineer in all Four Corner states, so New Mexico, Colorado, Utah, Arizona along with California.

Q. Have you received any other certifications during your career?

A. I have. I have held -- well, I currently have a registered remediation specialist credentials in Arizona and I have been a NORMS oil and gas inspector in New Mexico. That's inactive. I was a certified environmental scientist while being a consultant in New Mexico, but that too is inactive, and I have been a registered environmental consultant in Colorado.

Q. Would you turn, please, to what's been marked as NMOGA Exhibit 6.

A. I am there.

Q. Do you recognize that?
A. I do.
Q. Would you please -- is that your resume, Mr. Lane?
A. It is.
Q. Was it prepared by you?
A. It was.
Q. Is it an accurate summary of your education and experience?
A. It is.
MR. FELDEWERT: At this point I would move the admission of NMOGA Exhibit No. 6.
CHAIRPERSON BAILEY: Any objection?
MR. JANTZ: I would like to ask what area of expertise Mr. Lane is going to be qualified in?
CHAIRPERSON BAILEY: That's after admission of the exhibits.
MR. JANTZ: I think that whether I object to the admission of the exhibit is going to be contingent on the area of expertise. We can maybe take care of both at the same time is what I'm saying.
MR. FELDEWERT: I'm confused about why he would object to the resume prepared by someone that contains an accurate description of his education

and experience. I mean, I am trying to admit the document. If he wants to object to the expertise he can certainly do that at the proper time. At this point I am trying to admit the exhibit.

CHAIRPERSON BAILEY: Do you have a response to that?

MR. JANTZ: I will withdraw my objection to the resume.

CHAIRPERSON BAILEY: Okay. Any other objections?

MS. GERHOLT: No objection.

CHAIRPERSON BAILEY: The exhibit is accepted.

(Note: Exhibit 6 admitted.)

MR. FELDEWERT: At this point I tender Mr. Lane as an expert witness in petroleum engineering and in oil field waste management systems.

CHAIRPERSON BAILEY: Any objection?

MR. JANTZ: No.

MS. GERHOLT: No objection.

MS. FOSTER: No objection.

DR. NEEPER: No objection.

CHAIRPERSON BAILEY: He is admitted as an expert.

Q (By Mr. Feldewert) I'm again going to be working off of NMOGA's Exhibit No. 1. Mr. Lane, I want to turn to what's marked as NMOGA's Exhibit No. 1, Page 2, because 17.7 K contains a definition of a multi-well fluid management pit. Do you see that?

A. I do.

Q. I want to give the Commission and perhaps yourself a time just to read that and reflect on that and then we will talk about it. Now, Mr. Lane, did you help craft this definition?

A. I did.

Q. Would you then, knowing now how it's defined, would you please explain what multi-well fluid management pits are intended to do and the benefits that you believe they will provide to New Mexico operators?

A. Well, they are intended to be a fluid storage pond or kit to enable operators to have an opportunity to store large quantities of water, predominantly produced water or water that's recycled so we can stimulate numerous wells and have a reliable source of water. The intent is to replace the current practice or at least augment what we currently do with temporary storage tanks or track tanks.

Q. Do you intend -- is your vision that these multi-well fluid management pits would be part of an overall development plan?

A. That would be the strategy is that we would identify all of the wells in a plan of development and that these would be centralized facilities or a centralized point at which we could service numerous wells minimizing the footprint of trying to establish either water storage or fluid storage facilities at individual well sites.

Q. Just along the lines of getting our first general understanding of the concept, when would these type of multi-well fluid management pits be closed?

A. The intent is to service all of the wells in that plan of development. So all of the wells named in the permit, as we intend here, they would be permitted and all of those wells with that plan of development would be fully described in the pit permit. So the intent would be that the pit would remain open over the life of that development project.

Q. Is this a surface waste management facility?

A. It is not.

Q. Why is that?

A. Well, for one, we have identified it as separate from that. It's more consistent with a temporary pit.

Q. Do you intend to dispose of waste within these pits?

A. No, the intent is simply to store those fluids so they may be utilized for that plan of development and then once the plan of development is completed, the intent here and the way it's proposed in this rule is that we would remove all of the remaining fluids, dispose or transfer them for recycling appropriately off-site. The liner would be removed and the entire pit area would be reclaimed so there would be essentially no waste left behind.

Q. Now, you mentioned the fluids. Does the concept here include disposal or long-term storage of drilling or completion waste? Or is the constituents of the pit going to be defined?

A. Well, the constituents are going to be essentially water, as identified both in the pit and as kind of spelled out here. These are not intended to be drilling pits. You are not going to be making up mud. You are not going to be transferring

cuttings or solids into these pits.

Q. And what's the benefit that you see to New Mexico operators and to the State of New Mexico for these types of pits?

A. Well, one benefit is we should be able to be more efficient in the way that we store water, stage water prior to completion of wells. We won't have to -- or it is an opportunity to replace use of frac tanks or temporary storage tanks for the water. The intent of these are to be fairly large, so we are talking larger than the temporary pits. Something on the order of, say, 20 acre feet or so. But that would allow operators to efficiently stimulate the wells.

One of the things we struggle with right now is that on temporary tanks we have to refill those tanks because we don't have enough reserve capacity, especially if we have a multi-well or a multi-stage completion like we might in a horizontal frac.

Q. Do these types of multi-well fluid management pits reduce the need for freshwater supplies?

A. They should. The intent is to be able to recycle and store produced water.

Q. Are similar centralized facilities like this being used in other states to promote the recycling of stimulation fluid?

A. Yeah. Essentially what's proposed here, WPX Energy, formerly Williams, uses these types of pits up in the Piceance Basin, so essentially we are just transferring that technology or proposing to transfer the technology here.

Q. I want to then have you turn to what's marked as NMOGA Exhibit No. 7. I want to bring up the first page on the screen. Do you still have that pointer?

A. I do.

Q. Okay. First off, do you recognize this picture, Mr. Lane?

A. I do.

Q. Where did you get it?

A. Well, this is a picture provided by our engineering and operations group up in the Piceance Basin. It is one of their water management facilities.

Q. Do you recall or do you know when this picture was taken?

A. I believe it was taken last summer.

Q. And was this taken from their records?

A. It is provided to me from their records, yes.

Q. So does this picture accurately depict the location at the time it was taken?

A. I didn't take the picture, but I assume that it is.

Q. Because it's kept in the company records?

A. It is kept in the company records.

Q. Does this picture provide a representative sample of the type of multi-well fluid well fluid management pits that you seek to have permitted under the NMOGA proposed modifications?

A. It does and it is conceptually consistent.

MR. FELDEWERT: I move the admission of NMOGA Exhibit 7-1.

CHAIRPERSON BAILEY: Any objection?

MR. JANTZ: No.

MS. FOSTER: No.

MR. CARR: No objection.

MR. NEEPER: No objection.

CHAIRPERSON BAILEY: So admitted.

(Note: Exhibit 7-1 admitted.)

Q. Would you outline for us, perhaps point out the different aspects of this multi-well fluid management system?

A. You will notice here it's lined, or at least you may see that it's lined with an anchor trench around the outside of this. Slopes are fairly consistent with what we have here or what we are proposing, about two to one. There is an integrated net and fencing system around it anchored so it can hold the netting over this.

This particular pond, if I ran my calculations correct, it encompasses about two acres in area and stores about 20 acre feet of water. In the background there's some tanks here. Those are used to both prefilter the water into it and also stage the water out and skim any impurities before they enter the pit.

Q. Is there a pumping system associated with this pit that connects it to wells in the area?

A. Well, this particular pit is not actually located on a single or a given well site. All of the well sites this particular pit will stage or service are actually on other remote pads. The pumping facilities are over where the tanks are as well.

Q. Roughly how far away are some of the wells that utilize these pits?

A. Somewhere on the order -- can be as far

away as a mile or more.

Q. Would you then turn to the second page of NMOGA Exhibit No. 7. Do you recognize this diagram?

A. I do. I drew it.

Q. I'm sorry?

A. I drew it.

Q. You authored this diagram?

A. I did.

Q. Is this a sample plan of development using a multi-well fluid management pit?

A. It's a schematic of how the process would work, yes.

Q. Will this diagram assist you in further explaining how a multi-well fluid management pit can be utilized as part of an overall development plan?

A. I hope so.

MR. FELDEWERT: Move the admission of Page 2 of NMOGA Exhibit No. 7.

MR. JANTZ: No objection.

MS. GERHOLT: No objection.

CHAIRPERSON BAILEY: So admitted.

(Note: Exhibit 7-2 admitted.)

Q. Mr. Lane, would you please explain how this multi-well fluid management pit concept can be utilized as part of an overall development plan?

A. Well, in the schematic, essentially it's depicting a plan of development in which there consists multi-well pads. I'm depicting a drill rig here in which there are somewhere around five wells on each of the pads. Could be as many as 10 to 20. In the Piceance they put as many as 20 in a given pad.

The idea is you have a centralized staging area for the well stimulation and well completion so that the drill rig can essentially do what they call simultaneous operations, drill and while you are drilling on the location come back and also stimulate the newly drilled wells so you kind of have a continuous process.

Producing wells would -- the water from producing wells, again, trying to recycle the produced water instead of using freshwater resources, would then be stored in the multi-well fluid management pit along with possibly some flowback water coming in from some of the more recently completed wells.

What I'm depicting here with the trucks is simply that the staging pad would also be the location for all of the pumping equipment and other equipment that's required to do the completion.

So essentially all of the tanks, all of the trucking and everything else that normally is staged and placed on a well pad could be staged off the well pad allowing for a safer drilling operation, safer completion operation and also reducing the individual footprint required for each of the stimulations by the multi-well sites.

Q. Mr. Lane, do any of the storage options that are currently available under the Pit Rule provide New Mexico operators with a practical means to store and recycle stimulation fluids for use at multiple wells?

A. Well, currently, aside from possibly permitting these as permanent pits -- and again, the permanent pit provisions limit us in size -- we essentially get stuck using multiple frac tanks.

Q. So temporary pits don't work because they are too small in size?

A. Temporary pits and permanent pits.

Q. Let me ask you this: Maybe you already answered this. What have New Mexico operators up to this point been forced to do given the limited options available to them under the current rule?

A. We use a header system, tying in multiple frac tanks.

Q. If I turn to then the third page of NMOGA Exhibit No. 7, do you recognize this picture, Mr. Lane?

A. I do. It's the -- it's actually the stimulation of one of our Rosa 634 -- I believe it's 634 A is the well they are stimulating now, but the two red circles on the diagram up there are where the two wellheads are.

Q. Before we go into the picture, where did you get it?

A. I got this picture from our operations and engineering group in the San Juan Basin.

Q. Do you know when the picture was taken?

A. About 2010, I believe the fall.

Q. Was this kept in the company records?

A. Kept in the company records.

MR. FELDEWERT: Move the admission of NMOGA No. 7.

MR. JANTZ: No objection.

MS. FOSTER: No objection.

MS. GERHOLT: No objection.

CHAIRPERSON BAILEY: It's admitted.

(Note: Exhibit 7-3 admitted.)

Q. Explain to the Commission what's shown in this picture.

A. What's shown in the picture, we have about a five-acre, four-and-a-half acre well site here. We have two wells that were drilled and completed. They were horizontal Mancos wells. This is the process of completing one of them. All these things on the diagram right are frac tanks that were filled by truck with freshwater in this particular case as we were exploring and testing the Mancos to see what would work.

They are completing -- I believe it's well A, 634 A and 634 B. You notice all of the pumping trucks are staged here behind them. The crane that's being used to hold the equipment for the stimulation, and then not much else to show except that you can see that the track area is quite tight in trying to move water in here.

Q. Now, this was an operation of a single-well location?

A. This actually has two wells on it right here.

Q. Okay.

A. Let me just say that we stripped all the other wells. There's actually, I believe, three other wells on this pad that that were stripped and covered to allow us to do this operation.

Q. If you were going to try to do this for multi-wells, would you need even more equipment than what is shown on here?

A. We might not. We would just have to slide the equipment around. But if we are to complete multiple wells on another location we have to do the same type of footprint on another location. This particular one, the wells that we talked about, we shut in production on all of those, so during the life of the drilling operations and everything, all of the other wells were not producing during this time.

Q. Okay. Can you put the comparison slide on? This is comparison of the first page of NMOGA's Exhibit No. 7 with the last page of NMOGA's Exhibit No. 7. Would you please then tell the Commission why you believe that New Mexico should allow for the permitting of multi-well fluid management pits?

A. If we are successful in permitting multi-well fluid management pits and actually it might not be a bad idea to go back to my schematic but I'll just stick with this here. We are hoping and actually have requested and permitted with the BLM to be able to take and drill ten wells on one well pad with a disturbed surface area of

approximately 2.5 acres. So we are talking numerous wells.

So in the scenario that I painted there a minute ago, we are talking four well pads with around 40 wells on them all being serviced from one well pad or one multi-well fluid management pit and the associated staging area, which we have currently submitted for application. That total disturbed area would be only five acres.

Q. Is there less surface disturbance associated with a multi-well fluid management pit than there would be for what is currently the option under the Pit Rule?

A. Certainly. We wouldn't have to move the tanks. We wouldn't have to make the surface area necessary to allow us to put those tanks there.

Q. This snapped on me when we talked about this earlier. You had the surface aspect of the pit, but the other benefit is the depth, correct?

A. Correct. If we were able to permit a multi-well fluid management pit of, say, 30 acre feet, 40 acre feet, you are talking about the surface disturbance of the pit itself is somewhere around two to three acres. Just to stage one stage of tanks -- well, to stage the equivalent surface

area for that in temporary tanks, you are talking -- I think I ran the calculations and you are talking about 3.3 acres, something like that. You're talking about 480 plus frac tanks, ten feet wide, 30 feet long, ten feet high.

Q. From an operations perspective, is it safer to have the option of a multi-well fluid management pit rather than the current option that you see in the right-hand corner of the comparison slide?

A. In my opinion, yes. You have less trucking. You have less valving. You have all of that. Just to add a note, the way that these multi-well fluid management pits would be staged into or the fluids brought over to complete those wells, it's on high pressure welded pipe.

Q. Now, the State Land Office submitted their prehearing statement prior to the hearing and they had a discussion in there about the emerging technology associated with reclaiming water for use of well sites.

A. Okay.

Q. Will this type of facility assist in that effort? I mean, do you need a facility, an economic facility to store reclaimed water if you are

actually going to go through the effort of reclaiming it for use in other sites?

A. The advantage of a multi-well fluid management pit is essentially as water is produced, so as Mr. Hasely mentioned, some wells produce a handful of barrels of fluid. We have coal bed methane wells that produce over 100 barrels a day. Being able to pump -- collect all of that water and place it in the multi-well fluid management pit would allow us to capitalize on the fact that we have the fluids available to us. They're going to need to be filtered and I don't like the word "treated" because we are not treating them for contaminants but treating the water so it can be used for the stimulation jobs.

Q. I want to move to another type of pit, and that is how NMOGA proposes to regulate these pits. Under your -- I want to just talk about -- let's start at the 30,000 foot level. Under NMOGA's proposed modifications, essentially how will these multi-well fluid management pits be regulated?

A. Well, they would essentially be regulated like a temporary pit with the exception that they are not to have fluids or solids or waste disposed of or stored in them other than produced water. The

siting criteria for where to place these is consistent with the temporary pit siting criteria. There's no proposed modification in that siting criteria unique to these that I can recall.

The size of the pit is essentially the only real significant difference. They will be fenced, they will be netted. The requirements for netting -- excuse me -- the requirements for inspections are all essentially the same. The requirements for reclamation less the fact that you can't bury any waste in place, so they will be closed or reclaimed. They are essentially a temporary pit.

The last caveat to that is again, since the idea is to utilize the water on multiple wells would be that it may be there longer than a year. The development plan of 40 wells is probably going to take -- depending on closure and other limitations -- may take us up to five years. So again, I'm kind of drilling back into the details.

So what NMOGA is proposing here is that since these are going to be there for an extended period of time, that the design would include a leak detection or a double liner system. Actually, a double liner system with leaks detection. I take

that back.

Q. Okay. And let's turn then to the permitting provisions of the rules, so let's take a look at Attachment A, Page 5, which is Section 17.9. So under NMOGA's modifications to Section 17.9 A, what is going to be utilized to permit a multi-well fluid management pit?

A. Essentially we will use Form C 144.

Q. Will that C 144 then identify the development plan and the wells that are associated with the multi-well fluid management pit?

A. That is the intent is that all of the wells that would be serviced by the pit would be identified.

Q. Okay. Then if I take a look at 17.9 B 4, which is over on Page 7, that would contain then the permitting requirements, at least the requirements for the permitting for multi-well fluid management pits, correct?

A. Correct. And they are -- if you look, they are essentially identical to the siting criteria that's identified in permitting process associated with temporary pits under B 2.

Q. Okay. Then there are some -- on this particular page of Attachment A, there are some

provisions that are unique to multi-well fluid management pits with respect to closure, correct?

A. Correct.

Q. Where do we find that?

A. Actually, C 1. The closure plans for multi-well fluid management pits shall describe the procedure protocols for the removal of all unused stimulation liquids and the disposal of liner materials and any other pit contents, possibly netting, fencing, that type of stuff.

Q. So essentially under the closure plan, nothing is left behind?

A. Nothing is left behind.

Q. Then if we look at 17.9 D 2 which is on Page 8, the very next page, Permit Application, where are they filed?

A. The permit would be filed or the applications would be filed with the appropriate district office.

Q. So we would add multi-well fluid management pits to the pits that are falling under Subsection D 2?

A. Correct.

Q. If we turn to the siting requirements, the very next page, Attachment A, which is on Page 9 of

Exhibit 1, if I look first at the siting requirements for temporary pits in 17.A 1, we have just added to those requirements multi-well fluid management pits?

A. That's correct.

Q. So they are the same?

A. Yes.

Q. If I go to the very next section, 17-11, which begins over on Page 13, we have all the general specifications, correct?

A. Correct. You notice in A it's construction of a pit, so fluid management pits would fall under all of this.

Q. All of these provisions?

A. All of these provisions.

Q. Then if we look over on Page -- staying in the section over to Page 19, NMOGA's proposal does have a particular provision in there that deals in addition to the general requirements, deals with multi-well fluid management pits, correct?

A. Correct.

Q. These, again, would be designed as construction requirements, correct?

A. They are.

Q. Now, have you compared the design and

construction requirements for multi-well fluid management pits with the design and construction requirements for temporary pits which exists in Subsection F, Page 14?

A. I have.

Q. Are they essentially identical with some exceptions?

A. They are essentially identical. The only additions to the multi-well fluid management pits is the addition of the leak detection system which is down in 9, J 9.

Q. And then is there also reference to the leak detection system in Subparagraph 3?

A. That's the one I was looking for, yes. First sentence.

Q. All right. Again, those were added because you are dealing with potentially larger volumes and a longer period of time?

A. Correct.

Q. Other than that, are Paragraphs 1 through 8 of Subsection J identical with Paragraphs 1 through 8 of Subsection F dealing with the temporary?

A. That was the intent.

Q. Then if we look beginning then with

Paragraph 10, J 10, which is over on Page 20, there are some changes there, correct?

A. Correct.

Q. If you compare it to temporary pits?

A. Correct. We essentially just removed the size limitation of ten acre feet, which is F 10, and then F 11, which is the operator shall maintain -- I'm on the wrong page.

Q. Did we eliminate the provision dealing with flaring?

A. Correct. I was looking at the permanent pits. Anyway, we eliminated the balling requirement and because the pits are not intended to be used for drilling or completion or those types of returns where you would have possibly flaring, we removed that provision in the design stipulations.

Q. It doesn't apply?

A. It didn't apply.

Q. While we are on the design and construction specifications for multi-well fluid management pits, there was a concern expressed by the New Mexico State Land Office about the grading effects of solar radiation on liners. Are those addressed in Subparagraph J?

A. Actually, they are in both F and J. If

you look at Subparagraph J 3, and I just saw it. Second to last sentence reads, "The liner material shall be resistant to ultraviolet light," and the same language is in F. Essentially that's to address concerns about the solar degradation of liners.

Q. So the current rule under the temporary pits has a provision in it to avoid the degrading effects of solar radiation?

A. That's to be part of the liner design.

Q. And you carried that over to multi-well fluid management pits?

A. We did.

Q. Maybe you answered this question. Are the multi-well fluid management pits subject to the same fencing requirements as temporary pits?

A. Yes.

Q. And we see that in 17-11, which is on Page 13?

A. Yes, all of the general design criteria.

Q. And do they have the same netting requirements?

A. They do.

Q. In fact, if I look at 17-1 1E on Page 14 --

A. Actually, I take it back. Temporary pits don't necessarily need the netting but they have the same netting requirements as permanent pits.

Q. Looking at 17-11E on Page 14, you have added to the netting requirements the multi-well fluid management pits?

A. Correct.

Q. Let's turn to the operation requirements. They begin on Page 22 of Exhibit 1. Are multi-well fluid management pits subject to the same general operational requirements?

A. They are.

Q. And then we have special provisions in this section for multi-well fluid management pits, or I should say special additional provisions dealing with multi-well fluid management pits on Subsection F, which begins on Page 25 of the attachment?

A. That's correct.

Q. Now, one thing we did notice in going through this again with you was that there was a typo in the heading.

A. Correct. It should have had "multi" in front of "well fluid management pits."

Q. Does NMOGA's second set of proposed

modifications include adding the term "multi" to the heading here in Subsection F?

A. It did -- does.

Q. Okay. With that, would you walk the Commission through the additional operational requirements that are applicable to the multi-well fluid management pits?

A. Essentially, no operator shall place any substance in the pit other than stimulation fluids, produced water used for stimulation and drilling and flowback from multiple wells. Operator shall remove any visible layer of oil from the surface of the pit. The operator shall maintain at least two feet of freeboard, pretty consistent with temporary pits. The operator shall inspect the pit weekly while the pit has fluids and document at least monthly until the pit is closed. Inspections will include monitoring of a leak detection.

So this is the additional inspection. It's not enough of just inspecting the pit itself and the fluid levels but we are also looking at the leak detection system. The operator shall maintain a log of such inspections and make the log available for appropriate division, district office review upon request. Stimulation fluids may remain in the

pit until the operator ceases all stimulation operations as identified in the pit permit. There we are talking about the plan of development, all of those wells identified in that.

Q. So the pit will remain active and in use until the wells associated with the development plan at the time it's permitted have been completed?

A. Correct.

Q. Then continuing on to the closure requirements, at a high level, how do these closure requirements differ from, for example, temporary pits?

A. Well, at a very high level, essentially -- and we pointed it out previously. It's a little redundant in here because we keep repeating it, but essentially we are closing these by removing all of the fluids that remain that were unused for off-site recycling or disposal. The liner material, the fencing, the netting, everything will be removed and then the site will be reclaimed.

Q. Under what circumstance will sampling be required?

A. The provisions in here for sampling are -- and you can find that in 13 A 3 -- that we would not be required to do any sampling under the liner if

there was no evidence -- if there was no leak detected in the leak detection system. In all other circumstances we would have to sample under the liner following the protocols outlined below.

Q. Now, the Oil Conservation Division in their modifications have proposed adding to this particular paragraph that you are required to sample not only -- you are not required to sample -- let's see if I can get this right. You are not required to sample if there's no leak detected, number one. That's what we proposed, right?

A. Right.

Q. They added to that that you are not required to sample as long as no visual evidence is present at the time that the liner is removed.

A. That would make sense.

Q. Does that make sense to have that addition?

A. Yes, that's fine.

Q. All right. So essentially, the operator would be required to test upon the closure of a multi-well fluid management pit if there was a leak that was detected or if there was visual evidence present at the time the liner was removed.

A. Correct.

Q. Then just so there's no confusion, does 17.13 B apply at all to multi-well fluid management pits?

A. No, because there's going to be no end place burial, no waste that's going to be left behind. So B does not apply.

Q. Then dealing with the timing for closure, which is over on Page 36 of the Attachment A, and I think we are getting close to the end -- in 17.13E, which begins at the bottom of Page 36 and carries over to Page 37, multi-well fluid management pits are addressed in Subparagraph 8, which I guess continues over to Page 38, correct?

A. That's where I show it.

Q. Okay. And essentially when is a multi-well fluid management pit to be closed?

A. It's to be closed within six months of the date that we cease drilling and stimulation operations of all the wells identified in the permit. So when we complete the plan of development, we would have -- that last well, we would have six months from that time to close the pit.

Q. Same period of time that's currently allowed for for temporary pits?

A. Correct.

Q. If I look on Page 38 there's provisions in Subparagraph F for reclamation.

A. Right.

Q. Are they identical to all of the pits?

A. Multi-well fluid management pits have not been excluded from this.

Q. So they would apply equally then to multi-well fluid management pits as they do to other pits?

A. Contouring, soil cover, reclamation, revegetation. None of that has changed. Or we are not proposing a change anyway.

Q. And I have one final topic, Mr. Lane. That is, there has been some suggestion in some of the prehearing comments that there's no need to modify anything in the current rule -- and I guess including this -- because a company can always seek an exception or a variance under the proposed provisions. From your perspective, is it practical to seek from the division an exception or a variance for each circumstance in which you deem it appropriate to use a multi-well fluid management pit for the purposes of recycling fluids?

A. Well, exceptions and variances are -- or

exceptions are, needless to say, take a long time and are quite expensive just in the process and you are not guaranteed that those exceptions will fit into your plan of development. Here we are trying to provide some type of regulatory framework that appears to be consistent with what we envision a multi-well fluid management pit. Looking at models from Colorado, some stuff done in Oklahoma -- I'm not too familiar with the Texas stuff -- but we were trying to provide something where you don't have to go before the Commission nor the Division for an exception.

Q. Now, you mentioned that exceptions or variances take a long time. Has your company had experience with trying to seek an exception or variance under the current configuration of the Pit Rule?

A. We have formerly as WPX -- excuse me, as Williams Production.

Q. In the way the rule is currently configured, how difficult was it to get an exception or variance from the Pit Rule in terms of the time that it took to allow it to be considered?

A. We started specific to our Salt Water Disposal No. 2 well, we approached the Commission --

well, we approached the Division for a -- let's see. Our initial temporary pit application was submitted in November of 2009. With some wrangling it was decided that we needed to go to exception and that was in March of 2010, and --

Q. Wait. It took four months under the current configuration of the Pit Rule for someone to decide that you needed to seek an exception from the Commission?

A. We were told after a couple different applications. We modified the application at the district direction and it still came back that we needed to -- a decision was made that we needed to go to exception so we prepared the exception and attempted to go to hearing shortly after March, and it wasn't until -- July 29th I think is when we came before the Commission and an order was issued in September and we were unsuccessful in that exception request.

Q. So using the current process in the Pit Rule as currently drafted, it took your company over eight months to get a decision on your proposed exception?

A. Yes. That process took us eight months, yes. That's why nobody goes for exceptions.

Q. Mr. Lane, drawing upon your experience, in your opinion are the provisions that NMOGA has provided for regulating multi-well fluid management pits sufficient to provide a reasonable level of protection to groundwater and to the public health and the environment?

A. Oh, I believe so, yes.

Q. And in your opinion, will allowance of multi-well fluid management pits as part of the permitting process encourage operators to recycle stimulation fluids?

A. Absolutely.

Q. And in your opinion, will the proposed changes that we just reviewed allow WPX and other operators in New Mexico to more efficiently and economically produce oil and gas in this state?

A. Based on our current development plans, it definitely enhances the economics; makes them more favorable, I should say.

MR. FELDEWERT: That concludes my examination of the witness.

CHAIRPERSON BAILEY: Since it is 4:30, I believe we should delay our cross-examinations until tomorrow morning. At this time we can look to see if there are any public comments for people who have

signed up to make the public comments today. We do have one person who would make to make a comment. Amanda -- I can't make out the names. Do we have a person who has signed up as representing Wild Earth Guardians ready to make their public comment? Apparently not.

We will meet again and continue this case until tomorrow where we will pick up cross-examination of the witness. Is it possible to begin earlier than 9:00 o'clock? No? Okay. Then we will be here at 9:00 o'clock in the morning.

(Note: The hearing was adjourned for the day at 4:32.)

REPORTER'S CERTIFICATE

I, JAN GIBSON, Certified Court Reporter for the State of New Mexico, do hereby certify that I reported the foregoing proceedings in stenographic shorthand and that the foregoing pages are a true and correct transcript of those proceedings and was reduced to printed form under my direct supervision.

I FURTHER CERTIFY that I am neither employed by nor related to any of the parties or attorneys in this case and that I have no interest in the final disposition of this case.

JAN GIBSON, CCR-RPR-CRR
New Mexico CCR No. 194
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