STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION COMMISSION FOR
THE PURPOSE OF CONSIDERING:

APPLICATION OF LUCID DELAWARE, LLC TO MODIFY NMOCC ORDER R-13507. CASE NO. 14720 (Re-opened)

REPORTER'S TRANSCRIPT OF PROCEEDINGS

COMMISSIONER HEARING

October 4, 2017

Santa Fe, New Mexico

BEFORE: DAVID R. CATANACH, CHAIRPERSON
EDWARD MARTIN, COMMISSIONER
DR. ROBERT S. BALCH, COMMISSIONER
BILL BRANCARD, ESQ.

This matter came on for hearing before the New Mexico Oil Conservation Commission on Thursday, October 4, 2017, at the New Mexico Energy, Minerals and Natural Resources Department, Wendell Chino Building, 1220 South St. Francis Drive, Porter Hall, Room 102, Santa Fe, New Mexico.

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EXHIBITS OFFERED AND ADMITTED

(9:11 a.m.)

CHAIRMAN CATANACH: All right. Next order of business on the agenda is Case Number 14720, re-opened, which is the application of Lucid Delaware, LLC to modify NMOCD Order Number R-13507.

At this time I'd call for appearances.

MR. PADILLA: Mr. Chairman, Members of the Commission, my name is Ernest L. Padilla for the Applicant in this case. I have one witness.

CHAIRMAN CATANACH: Ernest L. Padilla. Okay.

Can I get the witness to stand to be sworn in at this time?

(Mr. Hunter sworn.)

MR. PADILLA: Mr. Chairman, may I approach?

CHAIRMAN CATANACH: Please.

MR. PADILLA: Mr. Chairman, to apprise the Commission of what this hearing's about, it's a motion based on a motion to amend Order Number R-13507. We're asking for three things. We're asking to change the depth of the disposal interval based on the actual log of the Red Hills AG #1 well. We're asking to change the operator from Agave Energy Company to Lucid Energy, the Applicant. And, finally, we're asking for an extension of time should there be any delays, as will be testified

by Mr. Hunter. You never know when you have unexpected delays and not meet the intended plans at this time. And the request is going to be for -- the extension of time is to complete the well and commence injection to January of 2019.

With that, I'll proceed with Mr. Hunter.

JAMES CARL HUNTER,

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

DIRECT EXAMINATION

BY MR. PADILLA:

Q. Mr. Hunter, would you please state your full name?

A. James Carl Hunter.

Q. Mr. Hunter, where do you live?

A. I live in Albuquerque, New Mexico.

Q. And what is it that you do?

A. I'm a consulting geologist.

Q. Where do you work?

A. I work with Geolex, Incorporated in Albuquerque.

Q. Have you previously testified before the Oil Conservation Division or the Commission and have your credentials been accepted as a matter of record as an expert in geology?

A. Yes, they have.

Q. Let me ask you -- for purposes of this hearing and for purposes of the Commission, let's just go over your educational background, to begin with, and ask you briefly where you were educated in geology.

A. I received my bachelor's degree at the University of New Mexico in 1980, and I received a master's degree in geology at the Colorado School of Mines in 1986.

Q. And, Mr. Hunter, what experience do you have in AGI applications and AGI work?

A. I first started working on AGI wells in approximately 2007 when we designed and permitted the DCP Midstream Linam AGI #1, which is located outside of Hobbs. Since that time, I have worked on the -- I would say the feasibility studies for AGI projects, well design, preparing the C-108 applications, supervising drilling and completion and supervising testing and final commissioning of the wells. I think the total number is around 17 wells since that time.

Q. Are those wells in New Mexico?

A. Yes, they are.

Q. Okay. And what specifically have you done with respect to the well that we're going to be talking about today, the Red Hills AGI #1 well?

A. I participated in the original feasibility study, in the development of the C-108 application and some minor applications in helping the drilling and completion of the well. I'm sorry. It has not been completed. Basically, the securing of the well. Also in doing some work in terms of designing, remedial work for a number of old wells, which were in the area of influence, that the order required that we attempt to replug.

Q. And that work was originally for Agave Energy Company?

A. That is correct. That was Agave at that time.

Q. Now you're assisting --

A. Now I'm assisting Lucid.

Q. Lucid. Okay.

MR. PADILLA: We tender Mr. Hunter as an expert geologist for purposes of this hearing.

CHAIRMAN CATANACH: Mr. Hunter is so qualified.

Q. (BY MR. PADILLA) Mr. Hunter, would you briefly tell us the history -- the current history of where we are today --

A. Where we are today.

Q. -- with regard to this well?

A. Uh-huh. After the well was originally drilled

and cased and capped basically with what we call a night cap in 2013, the well has been basically idle since that time.

It was originally designed and drilled because Agave anticipated that they would have a fairly large amount of sour gas into their Red Hills plant. However, changes in their business decisions meant that they were getting almost entirely sweet gas for about the last four or five years, so they left the well capped because there was no need for the injecting the gases.

Since that time, about a year ago, Lucid bought the assets of Agave. And some changes in their feed gas from different fields and different operators they purchase gas from now mean that more sour gas is going to be coming into the plant, and they need to reactivate the well, complete the well and use it as an injection well. The time frame of that is probably mid next year when they'll probably actually operate the well. They anticipate starting the completion late this year, hoping having that early in, I would say, January or February of next year.

In parallel with that, they are building the surface facilities, primarily the compressor equipment and associated controls and pipelines and that

sort of thing. That will also have to be completed and tested and verified, connected to the well before any injection can begin.

Q. What is the status of the well now specifically?

A. The well is -- I think the term would be TA or temporarily abandoned. The long string or the production casing is in. It's cemented. It's been tested. There is a diverter valve still in the well, also with a cement plug on top of that, and the surface of the well has been closed with what amounts to a temporary tree or a night cap.

Q. Mr. Hunter, have you compiled exhibits for introduction today or compiled --

A. Yes, I have.

Q. -- or compiled them from records?

A. Yes.

Q. Let's turn now to what we have marked as Exhibit Number 1, and I'll have you tell us what that is.

A. All right. Exhibit 1 was derived from research we did on the advice of Lucid and from discussions we had with Mr. Goetze at the OCD regarding what information the Division and the Commission might need to make a decision for approval to continue to complete

the well and activate the well.

We looked at, primarily, the number of wells that had been drilled in this area after the order, which was finally promulgated in January of 2012. If you'll look at the first page, there is a table here of the wells we found that were drilled in this area, and the second page is a map that shows the location of those new wells.

There are about, I think, nine wells here, almost all of them by COG. Those have been drilled, and they are lateral wells in the Wolfcamp at approximately 11,000 feet. The injection zone that we intend to use is approximately 6,500 feet. So there doesn't appear to be any reasonable way of communication between the injection zone and the area where COG has been putting in these new wells.

Q. Do any of the vertical components of the wells -- are they within the area of review?

A. If we look at the map, a number of things we could see here, the green numbers and lines are the -- you can see the pad locations of the COG wells shown here in green and the lateral patterns of those which are shown here also. Also, over at the far northwest corner of Section 13, there is a well shown magenta. That is the Matador production location. As of the last

time I checked the Division's records, that well had not yet been completed.

Q. But that's clearly out of the area of review?

A. Yes. That's well out of the area of review, and it will also -- it is intended to be a lateral in the Wolfcamp more or less parallel to these other wells.

There are two circles on this map that I want to bring to your attention. One is red and one is blue. When we prepared the original C-108, we did a calculation of what we would expect the radius of influence of the acid gas would be after 30 years of work at approximately 13 million cubic feet a day, which was what Agave anticipated at that time. As you can see, it's just a little more than half a mile from the center of the well itself, which is shown in red there on the pad.

Since that time, more information from Lucid has informed us that the amount of acid gas that they'll have will be more on the order of 5 million cubic feet a day or less than half the amount we had anticipated before. The red circle shows the 13 million cubic feet a day, and the blue circle shows the 5 million cubic feet a day. Both of those circles are still well away from the vertical location of any of the wells that we saw in this area.

Q. Mr. Hunter, you show the Lucid Red Hills Gas Plant and the southwest area. What is the status of the plant now?

A. It is an active gas plant.

Q. And what infrastructure is being implemented at this time to commence injection?

A. My understanding from Lucid has been that they are going to do some upgrades on the sweeteners to handle more of the sour gas, and they're going to build, as I said earlier, the compression facilities to pump the -- pump the gas from the plant over to the well.

Q. And they're working on that now, to your knowledge?

A. As we speak, they are working on that.

Q. Do you have anything else to tell us about Exhibit Number 1 and things depicted on the map?

A. Well, let's see. It shows the location of the plant. It shows these completed wells in green, the proposed well in magenta, and also you can see the road is along the public highway. I think it's 22, I think. But this is the road between Jal and Carlsbad.

Q. Let me ask this: The COG wells, how deep -- how deep are those wells?

A. They're all approximately 11,000 feet deep.

Q. And what's the difference in depth between

the -- the Wolfcamp Formation where these wells are completed and the Cherry Canyon at the disposal interval?

A. Well, as we -- as we look back at this table, that indicat- -- that shows here, in the column on the right, the total depth -- or total vertical depth shows that the Agave injection well -- or I'm sorry -- now the Lucid well will be completed approximately 6,650 feet. All of these wells are at least 11,000 feet deeper and a few just around 10,900, but they're all approximately 4- or 5,000 feet below our injection zone.

Q. Anything else on Exhibit 1?

A. I think that pretty well covers it.

Q. Let's go on to Exhibit Number 2, and tell us what you have compiled.

A. All right. This is in support of our other -- our other applications concerning the change of -- the change of the depth and the change of operator. If you look at the first page --

Q. What is the first page?

A. The first page is a Form 3160-5 from the Bureau of Land Management. It is a sundry form, and basically this was approved by back in 2013 for the change in the depth of the well from 6,600 feet to 6,650.

Q. But you already completed -- that was after you

completed --

A. This is after we had drilled the well. Yes.

Let me just give a little background here. The land that the plant sits on is owned by Lucid. It is fee land. But the mineral rights underneath are owned by the federal government. So when we originally permitted this well, we also had to go through an APD or an application for permission to drill to the BLM. They certainly reviewed all of our plans down into the details on the cement, the casing and so on. And we also gave them sundries at each stage of the drilling, and they all saw it, so I believe at several points observed our cementing and cement, pressure-testing of the well as well. So they were fully informed of the operation here.

Q. And that was way back then?

A. Yes.

Q. Let's go on to the next page.

A. Okay. The next page is a rather blurry picture of logs, which shows two logs. One is from the -- what was then the Agave Energy Red Hills AGI #1, the well we're discussing. The other was for the Superior Oil Government L2, which was located about a half mile away, and this was our reference well for looking at where we would expect to find these sand zones in the Cherry

Canyon.

Q. For the Red Hills?

A. For the Red Hills.

When we originally prepared the 108, we gave our best estimate of what depth we would be perforating and completing in. Once we looked at the well itself -- and it's a rather complete suite of logs that we did -- we saw that our target zone was roughly 50 feet deeper than we anticipated. So that's why we went back to the BLM to get their permission to go down that other 58 feet, but we still at that point did not complete the well.

Q. Okay. Let's go on to the third page.

A. This shows things a little more easily. These show cleaner copies of these logs. On the right, in green, you see what we saw from the porosity logs as our sand beds that we plan to inject into. And then on the left, you see the logs from our well, the AGI #1. You can see that the marker bed, so to speak, are approximately 50 feet deeper than what we saw in the other well.

Q. Now, on the log for the Red Hills AG #1 well, you have some lines in there. One is red and one is blue. Would you explain what those lines depict?

A. Certainly. The red line, which shows right

along the center of the footage ticks, was the originally proposed injection zone from approximately 6,200 to 6,530 feet. The blue line shows what our revised new injection zone is, and it picks off at about 6,230 down to about 6,583 and to basically span what we believe are these permeable and porous sand zones.

Q. Let's move on to your -- the next page.

A. Uh-huh. The next page was the original well design that was included in the original C-108, and it shows the perforations from 6,200 to 6,350 as they were shown in the red line in the previous page. It also shows the anticipated depths of the casing and of the packer and various other details of the well.

Q. Mr. Hunter, I noticed that you seem -- well, let me ask a question this way: Does this wellbore schematic show cement --

A. Yes.

Q. -- throughout each casing?

A. Uh-huh. All the casing strings were cemented completely to the surface. They were also tested with CBL logs.

Q. You have -- in red is a notation there labeled as "corrosion-resistant alloy joint."

A. Yes. It's been our practice for many years with our AGI wells that the lower, approximately, 300

feet of casing above the perforations and in the section where the packer is set to be constructed of a corrosive-resistant alloy, typically chrome nickel alloy, which is fabricated to protect that section of the casing and to protect the packer. This is -- this is not a liner or a -- or a blanket or anything. It is actually the casing itself, 7-inch casing, but it's manufactured as these special alloys.

Q. This was the original proposal, right?

A. That is correct.

Q. As shown on this well schematic?

A. Yes.

Q. Now, let's turn to the next page, which is Form C-103. That's a state form, right?

A. This is the state Form C-103 sundry, which we submitted to the Hobbs office, basically saying the same thing that was said in the BLM form from several years back and basically indicates that we wish to use the slightly different depths. And we give the specific perforation zones down here in item five.

Q. Was this form approved by the OCD in Hobbs?

A. Yes. It was -- if you look to the next page, it was signed off by Maxey Brown at the Hobbs office in August of this year.

Q. Let me go back up to the top where there is a

change that says "Agave Energy Company" in handwriting, and "Lucid Energy Delaware, LLC" was scratched out.

A. I -- to the best of my knowledge, that's Maxey's handwriting. I don't know why he did that. But he may not have been aware that the transfer of the assets had gone through at that time. It had been, though.

Q. Okay. Let's go on through some of the dialogue that you have in here, and let's look at the middle of the page -- of the first page. What do you -- what are you saying there?

A. I'm sorry. Will you speak up?

Q. Middle of the page, starting in 2013 --

A. Uh-huh.

Q. -- what are -- what are you saying there?

A. Well, what we're saying here is just giving a quick summary of the history of the well from the time it was drilled by Agave until the status at this time and what we wish to do forward from this day.

Q. Okay. Let's go on to the next page then. Tell us about the casing and what's actually been approved here.

A. What has been approved here -- and we can go back over this in any detail you wish. Basically, they have approved our plan for the completion. These

bullets here, 1 through 21, which are on page 1 and page 2, describe the detailed steps of the completion. We have probably a much more detailed work plan for this than they have in hand, but this is basically a bulleted summary of the process we plan to use to complete the well.

Q. Tell us about the nickel alloy that you're using.

A. All right.

Q. What experience have you had?

A. We have used this in probably over a dozen wells. We've never had a problem with any of them. Not only is the casing constructed of the CRA, as we call it, but the bottom approximately 300 feet of the injection tubing is also constructed of the same alloy. So what you have is basically like a U tube [sic] approximately 300 feet long of CRA that sits there above the packer. And so in the unlikely event that any acid gas were to flow back up in there, it would not attack the normal steel that the rest of the well, the rest of the casing and the rest of the tubing is connected with.

The other thing is that we are using -- rather than using a more or less conventional packer tubing of brine or a light potassium chloride fluid, we use diesel fluid with both corrosion and bioactive

inhibitors to prevent any corrosion of the well. One of the reasons we like this is because if any acid gas did get in, it would not react with the diesel fuel. If there was water or brine in there, the acid gas would react with it and create acids which would very quickly, I think, damage the casing and/or the tubing or the packer.

Q. Is that a safety contingency of sorts?

A. We consider it at this point the best practice for safety and for the mechanical integrity of the well.

Q. On the surface, what kind of safety concerns do you have to address?

A. Okay. The main driver of -- well, there are two main drivers of this. One is just basically the industry's best practices of safety concerning hydrogen sulfide. The other is that the plant has to maintain and update as necessary a hydrogen sulfide contingency plan. And until that plan has been approved and reviewed by OCD, they cannot have approval to start injection.

What this typically involves is a number of automatic H2S sensors arrayed around the well. Usually there are half a dozen around the well. Then there are a number of them along the lines that go from the wells to the compressor, another set of detectors around the

compressor skids and then additional detectors all the way back from the train to the sweeteners and to other locations in the plant.

If more than a certain amount of H2S is detected, first there is a plantwide alarm. If that continues or rises above other levels, it shuts down the plant even without anybody being there, and automatically shuts down productions or shuts down injection. It also shuts down safety valves throughout the injection train to isolate any H2S.

Q. Mr. Hunter, item 21 calls for mechanical integrity test. What is that?

A. Basically, it's a pressure-test of the annulus between the tubing and the casing. And the annulus is pressured up for a specified pressure, usually 5- or 600 psi, and then it's monitored typically for half an hour to make sure it doesn't change plus or minus 10 percent during that period. If so, then the well is deemed to be -- to have good integrity and then can be started to inject.

Q. Can you move on to the well schematic on the next page?

A. Certainly. This, on the next page, is what I will call the as-built. This is the well as actually completed. There are a few minor changes in the casing

depths, a few other details. I can go over those if you wish. But if we looked at the 13-3/8 surface casing, it's now at 1,372. If you look over on the far left, you'll see a little notation of magenta dolomite. That is a marker bed at the bottom of the Rustler, which the BLM sees as the target for setting your surface casing, because we want to put the surface casing in a competent bed just above the Solado salt.

Further down, we then see the 9-5/8 at about 5,346 feet. Again, we set that in the Upper Bell Canyon, again looking for a competent limestone bed that we can use to set the casing on so there would be no movement or leakage in the casing. We then proceed, the long string or the 7-inch casing down to 6,650 feet, and then it's basically -- that's the total depth of the well, and there is a small cement plug right down there in the 7-inch. The perforations we show here is our primary target. Those are the anticipated perforations that we had in the 103. Those are based on direct picks from the logs.

Q. What is the red there?

A. The red, again, shows the CRA casing. And it didn't quite print through here, but there is also a CRA on the tubing as well, at approximately 200 feet above the packer. I might add that the packer is also

constructed of corrosion-resistant alloys and seals. And, likewise, the expanding parts and so on are all designed to be resistant to acid gas.

Another item up here just about 200 feet below the surface -- I'm looking to see if it's on here or not; I don't see it. But we put a surface safety valve on the tubing approximately 200 feet below the surface. This is a one-way valve. It allows gases to go down, but it has basically a flapper that stops anything from coming back up. It's typically held open by hydraulic pressure, which is controlled by -- on the surface near the wellhead. If, in some catastrophic event -- say a water truck crashes into the tree, the loss of hydraulic pressure would automatically slam that valve shut preventing any flow of gas back up from the well.

Q. Okay. Anything else on this schematic?

A. Not unless anyone has any other questions.

Q. The last item here is the change to the C-145. Is that something -- this, I understand, is the change of operator; is that right?

A. That is correct. And it was approved two days ago, and it basically documents the transfer of the well and the obligation of the operator from Agave, which no longer exists, to Lucid.

Q. I notice that the previous operator didn't sign this form.

A. That's correct. Basically, there is no -- there is no Agave. There are no more officers of Agave -- that are with Agave anymore.

Q. Mr. Hunter, do you have anything else to add to your testimony -- well, let me ask this.

A. Certainly.

Q. You're asking for three things, right?

A. I beg your pardon?

Q. You're asking for three things?

A. That's correct.

Q. You're asking for an extension of time to complete the well and commence injection to January 23rd, 2019?

A. That's correct.

Q. Why do you need that much time?

A. When we originally finished drilling the well, it was at that time that Agave made the decision not to complete the well at that time. So a lot of the equipment that we needed, like the packer, like the tubing, like the safety valve and so on, were not there. They never purchased them. So since this project has come back online about six months ago, we have been running around all over Texas and New Mexico to get the

appropriate amounts of tangibles for this job. Right now they're sitting in a warehouse down there. We think we've got everything we need, but the Halliburton people and the people from -- who are going to be doing a lot of our workover and the people from Lucid were literally laying down the tubing and packer and everything and making sure that all the thread sizes and everything is in order because we have a number of subs and crossovers between a lot of the types of tubing. So we are literally screwing it together to make sure it works before we put anything down the well. We still are scheduling a pulling unit and some workstring, and we're also getting some other contractors out there. So we're still trying -- we're still in the logistics stage of this project at this time.

Q. But the intentions right now are to complete the well by --

A. Yes, to complete the well by early next year. I'm not that familiar with the time frame of the building of the surface facilities. But, for instance, a compressor that would handle volumes of this acid gas is pretty much a custom-made compressor, and those are being built as we speak. I do not really know the time frame of when that'll be on the site, and then it would have to be assembled and tested. So what we're looking

for is just a reasonable time frame to get all these elements completed. The last thing I think we'd want to do is come up against a very short deadline when we're trying to make sure that we've done this job correctly and safely.

Q. Okay. Change of operators is not a -- that's a no-brainer, correct?

A. That's just an administrative effort. Yes.

Q. Right.

And how about the third prong you're asking for? We've talked about the perforations. We've talked about the change of operator and the delay and the extension. That's it, right?

A. All right. The changes in perforations, as long as you're in the same formation, the same zone, a change of just less than a percentage of the total depth of the well is typically just handled by a sundry or by a notification and is typically done administratively often just at the district level.

Q. Okay.

MR. PADILLA: I have nothing else for Mr. Hunter, and I offer Exhibits 1 and 2. Exhibit Number 3 is my affidavit showing that we have notified Kaiser-Francis of this proceeding. Kaiser-Francis was a participant in some of the prior hearings, so out of

caution, we notified Kaiser-Francis. You'll see the FedEx receipt attached to the affidavit.

Secondly, we notified Concho because their wells underlie the injection area. We haven't heard anything from Concho. And we hand-delivered the application -- a copy of the application to their offices, and that shows receipt by someone there.

We did not notify Matador because they're clearly out of the area.

CHAIRMAN CATANACH: Okay. Are you going to admit Exhibit Number 3 also?

MR. PADILLA: Yes.

CHAIRMAN CATANACH: Exhibits 1 through 3 will be admitted.

(Lucid Energy Delaware, LLC Exhibit Numbers 1 through 3 are offered and admitted into evidence.)

MR. PADILLA: We'll pass the witness.

CROSS-EXAMINATION

BY CHAIRMAN CATANACH:

Q. Mr. Hunter, the previous order in this case for Agave, did that have an expiration?

A. Yes, it did.

Q. So did --

A. There were a number of -- I think there were

several other amendments to the order, but the last one had an end date, I believe, of January of this year.

Q. January of '17?

A. Yes, to my -- best of my knowledge. I don't have it right in front of me, but I believe that's when it expired.

COMMISSIONER MARTIN: Expired on that day?

THE WITNESS: Yeah. That was their drop-dead date for starting injection. That was also -- I think it just sort of fell through the cracks because that was the same time frame the purchase was being finished between Lucid and Agave.

Q. (BY CHAIRMAN CATANACH) So part of the problem -- or reason for bringing this case is to kind of get that reinstated?

A. To get that straightened out, yes.

Q. Just for your information, on the form you submitted to Maxey, the sundry notice, he changed that because the operator had not officially been changed?

A. I think that is correct. They had begun -- they had gotten an OGRID number, but they hadn't gotten the official notification -- the official change of operator had not yet gone through. This was done in August, and we finally got the final -- the final approval of the change of operator just two days ago.

Q. Right. Okay.

A. So we can either resubmit that to Maxey, or we can handle that when we put in the subsequent report, either way or both.

Q. Yeah. I think it might be better to resubmit the proposal to them with the change -- you haven't done any of the work, right?

A. Oh, no. No, no.

Q. It would probably be a good idea to just resubmit it with Lucid Energy.

A. I can certainly do that.

Q. Did your original -- do you know if the original order limited the volume of acid gas?

A. I don't believe it did.

Q. So there is really no change there. You actually have a reduction in the --

A. That is correct.

Q. -- volume?

A. Approximately -- a little less than half.

Q. Okay. With regards to the area -- to this area in the Wolfcamp wells that are being drilled, there is not really any way to anticipate whether or not there will be a well drilled with a surface location within the blue circle; is that correct? Is that a fair statement?

A. There is no -- there is nothing that would stop someone from doing that, other than whether or not BLM might approve of that or not. I'm not -- that's up to them. I don't know. There is nothing -- there's nothing that I am aware of that would prevent anyone from drilling inside of that circle.

Q. And it looks like the way the horizontal wells would be drilled -- they're being drilled from north to south --

A. That is correct.

Q. -- on the surface locations?

But it's conceivable that they could start in the south and drill to the north, so there could be some wells in your area, which kind of leads me to my next question. Do you think that -- if these wells are drilled through the injection zone, do you see that as an issue with regards to fluids escaping from the zone?

A. I think the only think that should be taken into account there is -- obviously, the operators who plan to drill these wells are going to be very much aware of this, and we would certainly work with them to make sure that when they go through their well design, that they would use an appropriate -- like, for instance, acid-resistant cement or take some care with their casing specifications. Obviously, I don't think

anybody's going to come within, you know, a few hundred feet of that or something. For one thing, they're sitting on fee land that's owned by Lucid at this point. But more to your question, yes, there could be potential problems. I do not think that they cannot be addressed by technical and engineering approaches.

Q. Adequate drilling mud weight and things like that?

A. That's correct.

Q. Okay. What do you know about the Delaware? Is there any Delaware production in this area?

A. Not within several miles to the -- as far as I know. That is one of the things we obviously looked at, a very thorough investigation of, before we submitted the 108.

And one other item in here I might go back to -- where am I here -- Exhibit 2, the 103 that we gave to the Hobbs office, second page, Number 6, "Swab approximately 500 barrels of fluid" to monitor for recoverable hydrocarbons. One of the conditions of the BLM APD was that before we inject, we give them a demonstration of no recoverable or economic hydrocarbons in that zone. That's what we're going to do with our frac tank of formation fluid, among other things. But also I would say that during our drilling of the well,

neither our porosity logs nor our mud logs gave us any indication of gas or oil in that zone.

Q. I did notice just one slight error. Your injection zone is proposed to be 6,230 to 6,583?

A. Roughly, yes. Uh-huh.

Q. I did notice on your schematic you had perfs at 6,585.

A. I don't know if we've got a typo here or what (laughter).

Q. A couple feet deeper. You know, I don't think it makes a difference, but I think to clarify, injection is only to 6,583?

A. 6,583 is what we're good with. Yes.

Q. So what happened to Agave? They just --

A. About two years ago, Yates was sold. I think, basically, it was a family company. Basically, I think people just wanted to move on, whatever, maybe cash out. But different assets of Yates, including Agave, which was their midstream unit, were sort of sold piecemeal. And one of the pieces that was bought by Lucid was the Agave assets. That's how that got there.

Q. And then there was nobody left to sign the documents to change the operator?

A. Some of these people probably are working for Lucid as we speak, but the entity, Agave, was dissolved.

Q. Okay.

CHAIRMAN CATANACH: Commissioners, questions?

COMMISSIONER BALCH: I have a couple of questions.

Do you have any questions?

COMMISSIONER MARTIN: Go ahead.

CROSS-EXAMINATION

BY COMMISSIONER BALCH:

Q. Do you know if there is any communication with Concho on the design of their -- the vertical portions of their Wolfcamp wells?

A. You mean any communication with us?

Q. With anybody at Agave or Lucid or Geolex.

A. Not that I'm aware of.

Q. So no real considerations were put into their well designs? Are you familiar with their well designs?

A. I'm not familiar with their well designs. I've looked at a few of the files on them. They seem to be just pretty much a conventional string down to the pick-over [sic] point. I'm not aware of them getting in touch with Agave or with us.

Q. Okay. The reason I mention that is I'm a curious person. So I had one of my graduate students do a simulation study of the plume for this well.

A. Oh.

Q. I believe it was this well.

CHAIRMAN CATANACH: I don't recall.

THE WITNESS: I think I saw that. I think I saw that. Yes.

Q. (BY COMMISSIONER BALCH) Yeah.

And essentially the plume in this case would be twice as much diameter as -- as was predicted by the volumetric.

A. Were they using probably a different --

Q. They were using whatever was in the -- in the original permit application.

A. Ah.

Q. So obviously your perforations have changed. You would probably have better information now than you did then on porosity and --

A. At that time.

Q. -- and whatnot.

So I'm not saying that's a piece of evidence or anything, but it does put the potential in that particularly those wells that are immediately north of the injection well --

A. Might eventually be impacted.

Q. -- eventually be impacted.

Yeah. So I don't know if that's something

that --

A. That is a possibility. I would agree.

Q. -- might be communicated to somebody.

CHAIRMAN CATANACH: Well, that would also be based on the original volume.

COMMISSIONER BALCH: On original volume.

THE WITNESS: Yeah. And we're using less than half of that now.

Q. (BY COMMISSIONER BALCH) But I don't think you're asking for less. You're just --

A. No.

Q. -- saying use less?

A. No. As far as I know, we did not have any volume cap in the original --

Q. Right. It's injection pressure?

A. Yeah. We just have an MAOP.

Q. So I think that was the other finding of the graduate student, was that you would not be able to sustain the initial -- you would not be able to sustain the injection rates that were proposed, so maybe down to five or --

A. Or the gas is not going to be as sour as we thought.

Q. But I think it's something that probably needs to go into the orders in the future, is how does the

company interact with not just the existing wellbores in the area but anything new that comes in. You're certainly not worried about the CO2 going to the Wolfcamp and impacting it.

A. The vertical sections of those wells.

Q. That's something I'd be communicating and something to think about if we are ever presented with the acid gas disposal rule.

On your Cherry Canyon swab test -- so for a long time, the Brushy Canyon was drilled through and nobody did anything with it. It was mostly water when they produced it.

A. Yes.

Q. Then when they fractured it, it suddenly started making oil.

A. Obviously, we're not intending to fracture it (laughter).

Q. Yes. That's exactly right.

So I would definitely want to take care with how you do that test to make sure that you can get any sort of indication at all if there are any hydrocarbons. Did you take core when you --

A. I'm trying to recall. I may have done some sidewalls. I'm not sure. We did a continuous mud log, and we weren't seeing any stain or fluorescence or --

Q. No strain or fluorescence?

A. No.

Q. I just wanted to note that.

A. Uh-huh.

Q. Those formations look like water normally --

A. Yes.

Q. -- even though they can in some cases?

A. Hiding -- something is hiding in there. Well, as we sit here, we'll be doing a step-rate test and a falloff test to give us an idea of what the breakdown pressure of the formation is. And we're certainly -- I think as we stand right now, our MAOP is -- by the formula that OCD uses, is pretty conservative. And we do not anticipate any change or any application for increasing the MAOP at this time. This is -- again, the step-rate test will tell us, one, the injectivity, and, two, give us an idea of where our ultimate cap is in terms of parting pressure.

Q. Great. That's all I have.

CHAIRMAN CATANACH: Thanks.

CROSS-EXAMINATION

BY COMMISSIONER MARTIN:

Q. Your reduction in volume, did that result in any amendment or change to H2S contingency clock?

A. It may. I mean, that will be reviewed, and the

H2S contingency plan be modified and submitted to OCD prior to any initial injection. In fact, I believe that's a condition, that that has to be approved before we open the valve.

Q. And on your notice of intent back in August -- that was approved back on August 21. As far as the MIT, do you have any reason to believe that the MIT will not be successful based on the inactivity in the well for some period of time?

A. I don't think so. I think -- obviously, if you look at some of the other items on our laundry list there, we're going to do quite a bit of work on the casing, as well as the tubing in terms of pickling it and scraping it and cleaning it out and seeing if there are any indications of any damage to the casing. We do not anticipate that. There has been no acid gas in that well since day one, and there won't be until everything is tested and approved.

Q. Okay. That's all I have.

RECROSS EXAMINATION

BY COMMISSIONER BALCH:

Q. I have one more question.

So you're looking at completing in November and --

A. Sure.

Q. -- completing in November.

And then you're looking at 13 months or so before your new injection drop-dead date in January of 2019?

A. Right. Uh-huh. '19.

Q. And you indicated that you weren't sure how long it takes to build the compressors and get them on site and tested?

A. That's correct. That's the -- I would say the softest point in our timeline is when we have those compressors online.

Q. So I think -- I would be a little bit concerned because I've priced some of those before. It's a six- to 12-month wait.

A. Yeah, which is why we have -- as I said, the order is in right now, but it's just a question of when you get in the queue and when the machine shop starts building. Yeah, they do take a while to build.

Q. Right. Yeah. They're custom. Okay.

CHAIRMAN CATANACH: I have a follow-up to Commissioner Martin's question on the wellbore.

RECROSS EXAMINATION

BY CHAIRMAN CATANACH:

Q. It's been TA'd for --

A. Five years.

Q. -- five years?

A. Yes.

Q. Do you know how -- what the current wellbore configuration is? Is there a -- is there a packer in the well?

A. No. No. No. There's just -- the only thing that's in there is the long string and I believe -- let me see here -- the DV -- DV at 5,539. Basically, after we did the cement job and did the second stage, there is, as usual, some cement sitting on top of that DV. That is still there. The rest of it is just filled with, I believe, fresh water at this point. So there is no packer. There is no tubing. It's just an uncompleted well.

Q. Okay. So it wasn't an approved temporarily abandoned status to where you actually tested the casing -- pressure-tested it?

A. I believe it was originally -- I'm just thinking. And I could go back through the files and look. But I believe there was an application just under a sundry for TA, and that was approved. And that's what -- that's what ran -- I think it was the -- I'm not sure if the TA has continued -- is in continued status right now or not. I don't know. But I know that the thing that drives them is the last date to inject was

passed.

Q. Okay. To get it into an official -- an approved TA status, you have to run a casing and pressure-test it. So I don't know that was ever done.

A. I don't know, but I'm certain that we can do it if you wish.

Q. Well, you're going to have to do it anyway.

A. We're going to do it anyway.

Q. Yeah.

Okay. That's all I have.

CHAIRMAN CATANACH: Anything further, Mr. Padilla?

MR. PADILLA: No, Mr. Chairman.

CHAIRMAN CATANACH: Okay. This witness may be excused.

Commissioners, do I hear a motion to go into executive session?

COMMISSIONER MARTIN: So moved.

COMMISSIONER BALCH: Second it.

CHAIRMAN CATANACH: All in favor?

(Ayes are unanimous.)

(Executive session off the record, 10:05 a.m.)

(10:23 a.m.)

CHAIRMAN CATANACH: So we'll call the

meeting back to order, and I will state for the record that during executive session, that we basically just discussed the issues involved in this case.

MR. BRANCARD: You need a motion to go back into open session.

CHAIRMAN CATANACH: Sorry.

Do I have a motion to go back into open session?

COMMISSIONER MARTIN: I so move.

COMMISSIONER BALCH: I second it.

CHAIRMAN CATANACH: All in favor?

(Ayes are unanimous.)

(Open session resumed, 10:23 a.m.)

CHAIRMAN CATANACH: Again, during the closed session, we discussed the case and issues involved in this case and nothing further.

And I will turn it over to Mr. Brancard.

MR. BRANCARD: Okay. The Commission proposes to amend Order R-13507 and the various children [sic] of that order to (A) change the disposal interval to 6,230 feet to 6,585 feet below surface, and also to amend the order to reflect the change of operator to Lucid Energy Delaware, LLC, and to amend the order to reinstate the injection authority under the conditions that exist in the current orders and to set a

new deadline of January 23, 2019. However, the Director is granted the authority to extend that deadline upon motion of the party for an additional 12 months.

Does that cover it?

CHAIRMAN CATANACH: Yes. And if you can provide us with a draft order, Mr. Padilla.

MR. PADILLA: I will.

CHAIRMAN CATANACH: And if you incorporate that other additional authority that the Director would have to extend that --

MR. PADILLA: Very well.

CHAIRMAN CATANACH: -- I think that would be great. So when is our next hearing?

COMMISSIONER BALCH: November 9th.

CHAIRMAN CATANACH: November 9.

So can we get a draft order prior to that so we can review it?

MR. PADILLA: Certainly.

CHAIRMAN CATANACH: Okay. Anything further?

(Case Number 14720 concludes, 10:25 a.m.)

STATE OF NEW MEXICO

COUNTY OF BERNALILLO

CERTIFICATE OF COURT REPORTER

I, MARY C. HANKINS, Certified Court Reporter, New Mexico Certified Court Reporter No. 20, and Registered Professional Reporter, 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 that were reduced to printed form by me to the best of my ability.

I FURTHER CERTIFY that the Reporter's Record of the proceedings truly and accurately reflects the exhibits, if any, offered by the respective parties.

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.

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