STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

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

APPLICATION OF DAN A. HUGHES COMPANY, L.P., FOR APPROVAL OF A UNIT AGREEMENT, HIDALGO COUNTY, NEW MEXICO

CASE NO. 14,022

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: WILLIAM V. JONES, Jr., Technical Examiner
CAROL LEACH, Legal Examiner

November 1st, 2007

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, WILLIAM V. JONES, Jr., Technical Examiner, Carol Leach, Legal Examiner, on Thursday, November 1st, 2007, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

November 1st, 2007
Examiner Hearing
CASE NO. 14,022

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A P P E A R A N C E S

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* * *

WHEREUPON, the following proceedings were had at 9:48 a.m.:

EXAMINER JONES: Okay, let's call Case Number -- First of all, Carol Leach is here with me as Legal Examiner today.

And let's call Case Number 14,022, Application of Dan A. Hughes Company, L.P., for approval of a unit agreement, Hidalgo County, New Mexico.

Call for appearances.

MR. CARR: May it please the Examiner, my name is William F. Carr with the Santa Fe office of Holland and Hart, L.L.P. We represent Dan A. Hughes Company, L.P., in this matter, and I have two witnesses.

EXAMINER JONES: Other appearances?

MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe, representing Harvey E. Yates Company. I have no witnesses.

EXAMINER JONES: Okay, will the witnesses please stand to be sworn?

(Thereupon, the witnesses were sworn.)

EXAMINER JONES: First of all I forgot to ask, are there any other appearances in this case?

Okay, go ahead, Mr. Carr.

MR. CARR: May it please the Examiner, the Application before you today is for approval of a voluntary unit agreement in Hidalgo County, New Mexico.

As the testimony will show, we've been working on this unit for approximately four years, and it encompasses 82,622 acres of state and fee lands in southwestern New Mexico. We had originally planned to submit this case to you by affidavit, but our time frame is very short. We have to have an order, State approval and a well drilling before January 1st. And if that does not occur we have 23,000 acres of oil and gas lease rights that will expire on that date.

When there was -- the Division advised it was not holding a hearing on the 15th and there was only one hearing in December, we became concerned that if there was additional information that you needed after our presentation by affidavit, we could find ourselves in a situation where we would quickly be in one of those fire drills where we were pushing for an order and going to the Land Office and trying to get the well started to hang on to this acreage.

And so what we did was, we decided to bring the case to you today and present it with witnesses so if you have any questions, everyone is here who can respond to any concern you may have. We're also going to submit a proposed order to you on the form that has been recently used to approve voluntary agreements by the Division. We'll submit it also in PDF format so that hopefully it

will facilitate this.

And so with that, I'd like to call our first witness, Larry Hunnicutt, who is our land witness.

LARRY HUNNICUTT,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARR:

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

A. I'm Larry Hunnicutt.

Q. Mr. Hunnicutt, where do you reside?

A. I reside in Dallas, Texas.

Q. By whom are you employed?

A. I'm employed by Stonebridge Energy, of which I'm an owner with Gary Kornegay.

Q. And what is the relationship of Stonebridge Energy and Dan A. Hughes Company, L.P.?

A. Stonebridge Energy is an exploration company engaged in exploration activity in the United States. We were actually brought into the project by the predecessor of Dan Hughes to develop a land strategy, geology and geophysics, and we have done that since 2003.

Q. Have you previously testified before the New Mexico Oil Conservation Division?

A. I have.

Q. And at that time were your expert -- were your credentials as an expert in petroleum land matters accepted and made a matter of record?

A. They were.

Q. Are you familiar with the Application filed in this case?

A. I am.

Q. Are you familiar with the proposed Hueco South Exploratory Unit, including the status of the lands in the proposed unit area?

A. I am.

MR. CARR: We tender Mr. Hunnicutt as an expert in petroleum land matters.

EXAMINER JONES: Any objection?

MR. BRUCE: No, sir.

EXAMINER JONES: Mr. Hunnicutt is qualified as an expert in petroleum land matters.

Q. (By Mr. Carr) Mr. Hunnicutt, would you briefly summarize for Mr. Jones what it is that Dan A. Hughes Company seeks with this Application?

A. The Hughes Company, as I refer to them, seeks to, with this Application, seek approval of the Hueco South Unit. It's a voluntary unit and containing about 82,622 acres, and -- for the drilling of the well on the unit on or before December 31st of this year.

Q. Have you prepared exhibits for presentation here today?

A. I have.

Q. Could you identify and review what has been marked as Hughes Exhibit Number 1?

A. Yes, that is the form of operating agreement. It's the state/fee exploratory unit agreement, containing the appropriate provisions, naming Dan A. Hughes as operator, and also with the working interest owners denoted on the signature page.

Q. Is Exhibit Number 2 a copy of the plat that shows the boundary of the proposed unit area?

A. It is.

Q. What is the status of the acreage?

A. The red line indicates the boundary, which is -- which encompasses the 82,622 acres. If you'll note, all of the leases in white there are state leases, the ones that are hached with red are fee.

This plat denotes the lessees, the legal descriptions and ownership of those leases.

Q. What percentage of the land is State of New Mexico land?

A. Approximately 95.5 percent of it is state lands, which is 78,942.60 acres.

Q. And how many fee acres are there?

A. There are 3680, representing about 4.4 percent of the unit area.

Q. Could you identify and review for Mr. Jones Exhibit 3?

A. Yes, Exhibit 3 is actually Exhibit B to the unit agreement, and it describes the lands, the leases, by serial number and expiration date, also sets out the lessee of record, and it comprises, as you see, the total of 145 tracts that comprise the unit.

Q. And 144 of those tracts are state leases; is that correct?

A. That is correct.

Q. Let's go to Exhibit Number 4, and I would ask you to identify that for the Examiner.

A. Exhibit 4 is actually Exhibit C to the unit agreement, and it shows the participants in the unit, being Dan A. Hughes Company, Fort Worth Operating Company, Yates Petroleum Corporation and Harvey E. Yates Company, sets out their net acres and also their unit participation.

Q. What percentage of the working interest is voluntarily committed to the unit agreement?

A. At this time it is 94-percent committed.

Q. And who has committed?

A. Dan A. Hughes Company, obviously, and Fort Worth Operating Company.

Q. Harvey E. Yates Company has not?

A. That's correct.

Q. And Yates Petroleum Corporation has not?

A. That's correct.

Q. Are you continuing to talk to those companies?

A. We are in discussions with both companies, land personnel and have extended an invitation, of course, to share some technical data with them. And my understanding, they're vetting the documents and reviewing the technical presentation.

Q. Would you identify what's marked Exhibit Number 5?

A. Yes, these are letters that we prepared in our office, inviting Yates Petroleum and Harvey E. Yates to contribute their leases, as denoted on Exhibit B, and to invite them to participate in the unit and participate in the initial well.

Q. And have you provided the unit agreement and joint operating agreement to each of these companies for their review?

A. We have.

Q. Would you identify what has been marked as Exhibit Number 6?

A. Exhibit Number 6 is a letter from the State Land Office by the Commissioner, granting preliminary approval

of our expanded unit. And it was received -- our proposal had been made of October the 1st, our letter of preliminary approval is dated October 15th, '07.

Q. Mr. Hunnicutt, could you explain to the Examiner the basis for the selection of this unit boundary?

A. Yes, and in that I may say about the setting, we're about 150 miles west of El Paso and maybe 120 to 130 miles east of Tucson. You have the Animas Mountains, and you have the Big Hatchet Mountains, many people are aware of, and the Alamo Hueco Mountains.

And between them you have the Playas Valley, and this unit actually is in the Playas Valley. And it was constructed around the preliminary 2-D seismic data that we had acquired, which gave quite a vivid illustration of the potential of Permo-Pennsylvanian-age reefs, all the way through Cretaceous reefing, and the unit was designed around that in accordance with working with the Land Office, and --

Q. The boundary was really selected, was it not, based on a combination of land as well as geological considerations?

A. That's -- absolutely.

Q. Have you worked with the BLM in this area?

A. We have. As you will know, there are no federal lands in this unit. Most of the federal lands in this part

have been withdrawn or have been suspended from being posted, as we have tried to nominate lands in this area over the last couple, three or four years.

I think I've met with BLM five times since January. They're very aware of the unitization, we've worked closely with them on the development of our 3-D project, which is coming on in the first quarter of next year, and they certainly are aware of this unit and, I might say, the unit that's north of this.

Q. In fact, on the eastern side of the proposed unit area --

A. Uh-huh.

Q. -- there are BLM-designated wildlife and environmentally sensitive areas; isn't that correct?

A. That's correct. The Big Hatchet Mountains actually is an established wilderness study area, it has been for a number of years. The Alamo Hueco area is an area of critical environmental concern. I have been told that it is being considered for elevation to a wilderness study area. But the lands that are in and adjacent to this continue to be of a lot of interest to the BLM.

And the lands that are adjacent to our unit, while not in the mountain system, were elected to be suspended. They just elected not to put those up when we nominated them.

Q. So on the eastern side of the unit area, the federal lands are not included because they have withheld those from leasing?

A. That's correct.

Q. And the state lands on the eastern side are included?

A. That's correct.

Q. The State wants their acreage in, the federal government wants their acreage out?

A. Yes, sir.

Q. And that's why we have the boundaries such as we do?

A. It is.

Q. In these negotiations, have you acquired federal leases off to the north and east of the proposed unit?

A. We have. As recently as the first quarter of this year we were able to obtain about 4800 acres of federal leases up in the northwest quarter of the unit. That is fee surface, federal minerals, and that was after maybe a couple of years of working with them in terms of what we were doing up here seismically, we were able to finally get those posted, and we bid on them and were successful.

Q. And have you agreed with the BLM that if, in fact, the efforts in the South Hueco Unit are successful

you will expand the unit and offsets to the north --

A. Right.

Q. -- to pick up these recently acquired federal units?

A. We have. And in fact, I've been in discussions with them the last couple weeks, as late as Friday. We now have a formal meeting with them set for November the 8th in Las Cruces. They're aware of the Hueco South Unit, they've seen the exhibit -- or the unit boundary for the Big Hatchet North Unit, and we'll begin that process in earnest on the 8th.

Q. At this point in time can you say that you've acquired all the lands that are available for inclusion in the unit area?

A. We have.

Q. You have a number of leases expiring soon; is that correct?

A. That's correct.

Q. How many?

A. Well, it's just under 23,000 acres that expires January 1st of '08.

Q. Do you request that the order be expedited in this case?

A. I most definitely do.

Q. Is it your target to have the unit in place by

the 1st of December?

A. It is.

Q. And then are you prepared to drill the initial test well during the month of December?

A. We are.

Q. Is Hughes Exhibit Number 7 a proposed order approving this Application?

A. It is.

Q. And does Dan A. Hughes Company seek to be designated operator of the unit?

A. Yes, sir.

Q. Does this agreement, your unit agreement, provide for the periodic filing of plans of development?

A. It does.

Q. And will the Hughes Company file these plans with the Oil Conservation Division at the same time they file them with the New Mexico State Land Office?

A. Yes, sir.

Q. What horizons are being unitized?

A. All horizons.

Q. Will you call a geological witness to review that portion of the case?

A. I'm sorry?

Q. Will Hughes call a geological witness to review that portion of the case?

A. Yes, they will. Gary Kornegay will give a presentation of geology.

Q. Were Exhibits 1 through 7 prepared by you or compiled at your direction?

A. Yes, sir.

MR. CARR: May it please the Examiner, at this time we'd move the admission into evidence of Dan A. Hughes Company Exhibits 1 through 7.

EXAMINER JONES: Any objection?

MR. BRUCE: No objection.

EXAMINER JONES: Exhibits 1 through 7 will be admitted.

MR. CARR: That concludes my direct examination of Mr. Hunnicutt.

EXAMINATION

BY MR. BRUCE:

Q. I just have one question. On your Exhibit 3, Mr. Hunnicutt --

A. Uh-huh.

Q. -- going to page 14 --

A. Let me get there, please.

Q. Sure.

A. Page -- ?

Q. Page 14.

A. 14, yes.

Q. Do I take it there's just one fee lease?
A. That's correct.
Q. Okay. I was confused by the splitting of the acreage.
A. It's all one lease.
MR. BRUCE: Thank you, that's all I have.

EXAMINATION

BY EXAMINER JONES:

Q. Mr. Hunnicutt --
A. Yes.
Q. -- you're the land witness, right?
A. Correct, I have a land background, yes, sir.
Q. But you're the managing partner --
A. -- of Stonebridge Energy.
Q. Stonebridge?
A. Uh-huh.
Q. Okay. Where are those 23,000 acres located that will expire January the --
A. Well, they're primarily located through the center portion of the unit.
Q. The heart of the unit.
A. The heart of the unit, quite frankly. And these acres are all described on Exhibit B. We did not prepare an exhibit showing exactly those legal descriptions, but we'd be glad to submit that if you would need it, for the

expiring leases, the January 1st ones.

Q. Where will you drill your first well?

A. Say when?

Q. I'm sure --

A. Yeah.

Q. -- we'll talk about that later, but --

A. Gary is going to go through that, but it's actually in Section 26, in the southwest quarter of the southwest quarter --

Q. Okay.

A. -- and an APD has been filed.

Q. With our District 4; is that right?

A. Correct, correct.

Q. Okay.

A. And a contract for -- a drilling contract has been signed, and so we are --

Q. Okay.

A. -- off and running with this.

Q. Okay. And what -- on these state units, what is the drilling obligations? You have to drill a well every six months, is that it, or something?

A. You do. You have to drill the well within 60 days of your order, and --

Q. Spud it.

A. -- and you have to spud it, and you are required

to drill until you establish commercial production, you have to drill a well every six months.

Q. Every six months, okay.

A. Uh-huh.

Q. Until you establish commercial --

A. Commercial production.

Q. Okay. And what is your primary -- You say all geologic structures, so whatever happens you will produce it, but what is your -- I guess we'll talk about that.

A. I'll be glad to do the geology.

Q. You seem pretty good at it.

MR. CARR: Mr. Examiner, on the drilling obligations, we have to have the unit in place and we must have a well drilling by the end of next month --

EXAMINER JONES: Does that count --

MR. CARR: -- so that at the end -- so when those -- if not, those leases will not be maintained.

EXAMINER JONES: Okay.

MR. CARR: And then we have to then file annual reports.

Q. (By Examiner Jones) Okay. Does that mean that you have to have -- can you go out there and set the surface pipe with a small rig, and does that constitute spudding the well when --

MR. CARR: It would.

THE WITNESS: That would.

Q. (By Examiner Jones) Okay. Can you talk more about the -- so this is ringed by -- Well, that sounds like that's more geology, so...

Well, how about surface? Can you talk about the surface out there? What's it like? It's in a big basin, right?

A. It is. It's actually the Playas Valley. And I liken it, being from southeastern New Mexico, to looking a lot like it does around Carlsbad.

Q. Oh.

A. Very similar. And this may be a little more lush because of some farming activities down here.

Q. Where are they farming?

A. It's flat as this table. You can see completely across the Playas Valley, and actually you can stand at this point right here adjacent to the Alamo Hueco Mountains, on the surface, and see Phelps-Dodge's smelter that's 20 miles from there, that smokestack. That came down, by the way, four or five months ago. You may have seen that in the paper, but --

Q. That's over in Arizona, isn't it? Or is it --

A. No, actually the smelter is up off of this map, it's actually about 20 miles up here --

Q. Okay.

A. -- and it's being decommissioned by Phelps-Dodge, and the stack itself is a landmark in New Mexico. It was taken down about six months ago.

Q. Okay. Can you talk about any of your competitors out here, or are you guys the dominant player, I guess?

A. Well, that would be fair to say. Actually between Fort Worth Operating Company and Dan Hughes, who are the major contributors to this unit, they hold about 173,000 acres of state and federal leases --

Q. Okay.

A. -- in Hidalgo County. So there's been an extensive -- by Gary and our geophysicist, an extensive effort made to discover and open up a new basin. The Pedregosa Basin has no production. This is a true frontier wildcat. We have very limited well control, even though the well control we have, I think Gary will tell you, is quite substantial in terms of quality of logs and data from it.

So where competition really is, is very sparse -- as that would relate to most places that we would be involved in.

Q. Yeah. If it's gas that you find, how would you get it out of here?

A. Well, actually Phelps-Dodge Corporation, who is decommissioning this refinery, owns a pipeline, a 6-inch

pipeline, that comes from El Paso from the south, and it was to the smelter. That's 20 miles. That pipeline is actually in fairly good shape. We've done some work on it.

We have been in continuing negotiations with Phelps-Dodge, and Dan A. Hughes recently was in those negotiations able to sign a comprehensive surface-use agreement, actually one of the most impressive ones I've seen, that sets out all the incurrences or disturbances that might happen on the surface, all the way from seismic to pits, roads. They've met with the tenants and -- Phelps-Dodge and the surface tenants out here, so that surface-use agreement is in place.

The other part of that was an oil and gas lease which they were able to record, I guess it's been probably -- August the 25th, I think, it was signed.

Now in those ongoing negotiations we're talking about this use of this pipeline. It can certainly be reversed. We've had some discussions with El Paso. And of course from the location we are to where the pipeline -- where we would hit the pipeline, is 13 miles. And it is all -- it's about 120 to 150 feet of sediments, it's not rocky there. We've done a little bit of work understanding that, and we could actually go straight from here, straight to there, and you could walk a direct line to that line.

So that's really what our hope is, and certainly,

as you would realize, we need to be successful with the initial well and maybe be drilling additional wells before we could come to that point of -- unless we use some kind of a coiled temporary pipeline system, which we have examined, we've costed out, we've talked to the manufacturers. Like everybody else, it's nine months to twelve months to get it on location. But quite frankly, the guy can -- they can install it in two days when it gets there.

So we're providing for that.

Q. That's interesting --

A. Uh-huh.

Q. -- I didn't know that was even an option.

The --

A. It's called Flex Steel, by the way.

Q. Okay.

A. Uh-huh.

Q. The pressures you would use for your natural gas, if you did find it, or whatever gas you would find, what would you power them with? Is there electricity out there?

A. There is electricity out there, and I haven't really addressed that issue directly but my guess is that there is electrical lines.

You do have the highway, Highway 10, above you about 40 miles. But you have a highway that comes down all

the way to Antelope Wells, which is on the border of Mexico and the United States. Essentially our leases are right there. That county-maintained road is very high quality. And along it you have telephone lines and electrical lines.

So in regards to this being a remote location -- all of us have had some experience in that -- this is actually going to be fairly easy for a frontier play, because you've got Deming, which is about a 50 -- well, about a 60-, 75-minute drive. I know that the crews that we've talked to will bivouac there, we won't have to build a camp, and most of those resources are out there.

Q. What about -- So you're going to call this southwest -- no, no, Dan A. Hughes Company. What operating history do they have, does Dan A. Hughes have? Are they an operator in New Mexico?

A. They are not an operator in New Mexico, but Dan A. Hughes Company is a -- was founded by Dan A. Hughes, and he's a gentleman distinguished in our industry in Texas, Louisiana, they also have international production. They have a complement of technical people that we deal with, geologists, geophysicists, land people, very efficient accounting group, contracts group.

I might just introduce Mr. Henry -- John -- excuse me, John, I said -- Kremers, who's the vice president of Dan A. Hughes Company.

Q. Okay.

A. They've taken an active role in coming into New Mexico, understanding our regulations, conferring often with us in our negotiations with the State Land Office for preliminary approval, and have been most acceptable, bonded all the way through, and they're ready to do.

I might say, they do own interest, working interest in New Mexico, in southeastern New Mexico --

Q. Okay.

A. -- and -- but certainly they are well -- we're very impressed with them. And they are the kind of operator, with the kind of projects that they have done, that fits an exploratory effort of this nature, and magnitude, by the way.

Q. Okay. So they would have a -- they would have development operations out here and set up shop somewhere in Deming or some -- Lordsburg or someplace, if this all works out, and have people -- Now where do you get your rigs, where do you get your workover rigs?

A. Well, this particular rig is coming out of Artesia, it's a Patterson rig.

As far as deploying people, I know that they have an office in Houston, an office in Beeville, Texas. My guess is that they will make strategic decisions about that based on the outcome of this well, and Gary will tell you

what the expectations are.

Q. He'll tell us what the outcome will be.

A. Yeah, he will.

EXAMINER JONES: Okay. Carol, do you any questions?

EXAMINATION

BY EXAMINER LEACH:

Q. You talked about a surface-use agreement. What's -- Who controls most of the surface, and what is its use currently?

A. Actually, within the unit -- and please forgive me if I'm off a little bit here --

Q. Sure.

A. -- but I would say that Phelps-Dodge controls -- of the unit, I'm trying to think of through the -- I know the State of New Mexico has three sections of surface, I know the BLM has eight sections of surface but no minerals, and the remainder of that is Phelps-Dodge. So if you look at Phelps-Dodge operation from the smelter, all the way to the Mexican border, you're really talking about somewhere in the neighborhood of 600,000 to 650,000 acres of surface that they have up here.

Q. And they're not doing anything with it?

A. Well, there are tenants, there is a farming operation -- actually two farming operations out there,

there's a dairy operation out there. We are familiar with the surface tenants, have met with the surface tenants. Our crew has done several field trips out there and the geologists have cracked rocks and walked mountains, but we have met with all of those. We always pre-inform them before we come, we're very respectful of what they're doing.

We also work pretty closely with Border Patrol there. As you know, this is a very sensitive area. So we always advance -- we tell them in advance when we're coming in. We actually fax them information with respect to where we're going to be, identify the vehicles we're going to be in, and clear it with the surface tenants.

And quite frankly, the way it's worked out, what we do is, we go to one of the surface tenants' home there, and we kind of bivouac there, kind of muster our forces, and he usually takes us on some of the more precarious backroads into the Alamo Hueco Mountains and Big Hatchet Mountains where we can get back in and actually get access to the rocks.

So we've had a lot of help there, we sure have.

Q. Did the BLM raise any issues about whether drilling in this area would affect the wildlife and things they're concerned about in their protected areas?

A. I might tell you that we're permitting a 3-D

survey. It's 39 sections, it's going to be roughly in the top portion of it. So I have talked to -- in the discussions -- normally, you would file a notice of intent with the BLM and go through a process, the NEPA process.

Q. Uh-huh.

A. We were able, in this situation, to be granted a categorical exclusion to that. And a categorical exclusion, as you know, eliminates you from the NEPA process, so you don't go through the EA and the various maturations of the reports that have to be written, emanating out of that environmental assessment.

So that being said, they did make field visits, though. And the BLM wildlife specialist in Las Cruces spent about a day out there, he did call me, gave me a brief rundown. The archaeologist has been site, the -- John Besse, who was heading up the team on the federal acreage also was on site. They all went.

And so essentially when you look at the resource management plan that applies to this area, you find there's not a lot of things to be really concerned about.

Now in the mountains, of course, and in the foothills there are more concerns about the jaguar, the lion, there actually is a cactus bat. But again, they did quite a bit of work understanding where we were going to be. You do have natural habitat in terms of yuccas,

cactus, and we have worked with them in detail to understand exactly where we were going, where we're not going. So we have had very good cooperation with them.

And in fact, as we go into this next unit proposal, we're going in there with the expectation that it's going to be exactly the same format we've had. They've all been on site, found no reason to not grant us a categorical exclusion, which is quite a significant statement in itself.

Q. This is just any kind of restrictions on the drilling or seasons or anything like that?

A. They did not. I think I should mention, though, that we actually nominated a lot of this land, and the resource management plan here is long in the tooth, so to speak, and they probably will address that at some point, as you would know.

But in that, when we were working with BLM, they were in -- based on the nominations that we were making and other people were making, which we didn't know, but we knew that there were other parties, they were interested in putting together some preliminary scoping of kind of what was going on.

In that, the Las Cruces office eventually appealed to the State BLM for funding, to see if they couldn't do more extensive work in this area so that we

could get these leases up. Well, that effort did not come about. So in essence what you see in federal lands out there are either withdrawn, formally withdrawn, or they're in suspense, where we've nominated them, they just will not post them.

So that has -- and really, which hasn't hurt our project to the extent that we have -- we've built it around state lands, purposely built it around state lands, and -- for obvious reasons. And in so doing, the BLM has been very accommodating to us in terms of -- But I think it's because we have made such an effort to keep them informed. I mean, we have been -- I have been in the Santa Fe office, I know, a half a dozen times in two years, and in the Las Cruces office, like I say, five or six this year, and innumerable phone calls, conversations with them, e-mails. We're just trying to work with them the best we can.

Q. When you were gathering the leases and things, did you learn anything about the water resources in the area, the groundwater? Or should we wait for that question till a little later?

A. Well, I'll defer to Gary on that, but I will say there's a -- I'm told there's an abundance of fresh water in this area, but I'm told it's also fairly deep. But we're mindful of it, in fact we had a conversation about that with the operator just recently, and we're going to

understand it a lot better before we start drilling.

Phelps-Dodge also, as you can well imagine, is very interested in the water issue. They have -- I know I can count five fairly large water wells, not right in this vicinity but in this basin. So we've been on those wells with them, and -- all that electricity, quite frankly, that's where it's going.

EXAMINER JONES: Okay. Any other questions?

Okay, thank you, sir.

THE WITNESS: Thank you.

EXAMINER LEACH: Thank you.

MR. CARR: May it please the Examiner, at this time we would call Gary Kornegay.

GARY L. KORNEGAY,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARR:

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

A. My name is Gary Lee Kornegay.

Q. Mr. Kornegay, where do you reside?

A. I reside in Houston, Texas.

Q. And by whom are you employed?

A. I am employed by Stonebridge Energy, I'm an owner in that company.

Q. Have you previously testified before the New Mexico Oil Conservation Division?

A. No, I have not.

Q. Could you review for the Examiner your educational background and your work experience?

A. I graduated from the University of Wyoming with my bachelor's of science in geology in 1973, and got my master's in geology, master's of science in geology, in 1976.

I have worked for Skelly Oil for a summer in 1975, and from 1976 to 1992 was employed by Pennzoil Company and worked in our Denver office as well as our Houston office as a staff geologist and ultimately ended my term there as the regional manager of the western division.

And then from that point I owned a point, KB Resources, and ultimately have been independent and am currently now with Stonebridge Energy.

Q. Are you familiar with the Application filed in this case?

A. Yes, I am.

Q. Have you made a geological study of the area that is the subject of this Application?

A. Yes, I have.

Q. Are you prepared to share the results of your study with the Examiner?

A. Yes, I am.

MR. CARR: We tender Mr. Kornegay as an expert witness in petroleum geology.

EXAMINER JONES: Any objections?

MR. BRUCE: No.

EXAMINER JONES: Mr. Kornegay is qualified as an expert petroleum geologist.

Q. (By Mr. Carr) Could you explain what is the primary objective in this proposed unit?

A. The primary objective is going to be the Percha shale, which is equivalent to the Woodford. We're going to make a shale gas play, it's going to be in the thermo-maturation window of where we're exploring, in the mid- to late-gas window. TAI, which is thermal alteration index, is 3 to 4 in the area that we're going to be drilling.

We anticipate TOCs that range from low numbers of .88 to as high as 1.56, and in some places we've even seen it up to 2.25 percent. Original TOCs would exceed 2.5 and maybe as high as 7 percent. So there's been a significant amount of gas generated out of the Percha shale, and we're anticipating that there will be a significant in-place reserve number.

Q. Has this formation been tested in this area?

A. It was drilled by the Humble well but was not tested. It was penetrated by the Humble well.

Q. Where would be the closest production from this formation?

A. The closest production from the Percha, at least tests of that, will be in the Midland Basin that's approximately 225 to 250 miles to the east.

Q. Are there secondary objectives in the unit area?

A. Yes, there are. We're very excited about some reef objectives, Pennsylvanian-Permian in age. The Horquilla formation will be the primary objective. It is equivalent to the Wolfcamp, Cisco, all the way through to the Morrow, Atoka, Strawn horizons.

We also have some Permian-age reefs that are -- occur in the area, and those would be the Epitaph and the Concha formations here, which is equivalent to San Andres, Wolfcamp and -- I mean, not Wolfcamp -- Bone Springs and Abo sections.

Q. Could you just describe for the Examiner the regional setting for the unit?

A. What we're exploring is the Pedregosa Basin. It's a large basin that extends down into Mexico, and roughly 250 square miles of that Basin is located in the US, primarily in southeast Arizona and southwest New Mexico.

The area that we're concentrating on and focused in is in Hidalgo County, New Mexico, west of the Big

Hatchet Mountains and west of the Abo Mountains.

The Big Hatchet mountains are great control points for us because we do have outcrops that involve all of the formations that we've got for objectives there, and we have integrated all of that data into our study.

Q. You indicated there had been a Humble well drilled in the area. Where is that, and what did it produce?

A. The Humble well was drilled on the east side of the proposed unit in Section 25 of 35 -- I'm sorry, of 32 South, 17 West. And that well was drilled to a depth of 14,585. It was drilled in 1958, and they ran logs, they tested the Epitaph, which is a Permian-age unit. They did recover 85 MCF a day, and there's rumor that it did flow as high as 500 MCF. We have not been able to confirm that rumor, but it's an exciting show.

Q. Mr. Kornegay, what is the basis for your geological interpretation? What information did you utilize?

A. We utilized all the -- we utilized proprietary and public information, we used all the geologic information that's been available from the State, there was geochemical studies that were made by Sam Thompson and -- We have integrated everything we could, surface geology, gravity, magnetics and seismic. The seismic is

proprietary, but we are willing to share the interpretation of that data.

Q. Have you contracted for additional seismic work in the area?

A. Yes, we are in the process of shooting and permitting a 3-D right now. We were hoping to have that 3-D available prior to drilling. We are not going to be able to have that available for our drilling efforts, but we will drill on the basis of our 2-D data.

Q. Let's go to what's been marked Hughes Exhibit 8.

A. Okay.

Q. Take that out, identify it, and review it for Mr. Jones.

A. Exhibit 8 is a map illustrating the distribution of the Percha shale throughout the unit. The unit outline is the black boxy unit on here. There are two different colors on this.

They've got black and white. I'll trade you color. Let me give you a color one, and I'll trade you.

EXAMINER JONES: Okay, thank you.

THE WITNESS: The colors are very appropriate for Hallowe'en --

EXAMINER JONES: Yeah.

THE WITNESS: -- but the colors represent the distribution of the Percha shale. The Percha shale is a

pervasive unit through the area. We see it in an outcrop, and every well that has penetrated to the depth of the Percha has Percha shale in it. It ranges in thickness from 300 to 350 feet in thickness. The TOCs, I mentioned -- TOCs and thermal maturities I mentioned earlier.

What we're trying to illustrate on this map is the laterally pervasive nature of this unit. It becomes deeper as we go to the east and is shallower to the west. There are a number of structural features that are in the are, and the Percha shale was simply a laterally extensive bed across the area.

The light orange on this map represents those depths below 8000 feet where we would encounter the Percha shale, and the dark orange are those areas above 8000 feet.

Our initial target, we would like -- that we're going to drill, we will be drilling the Percha at depths above 8000 feet.

Q. (By Mr. Carr) And in your opinion, is this shale present throughout the unit area?

A. Yes, it is.

Q. Potentially productive throughout the unit area?

A. Absolutely.

Q. Let's go to what has been marked Hughes Exhibit Number 9, and I'd ask you to review that for the Examiner.

A. Exhibit Number 9 has a number of things on it.

The first is, the colors on here represent the reef tracts that we can observe on seismic and that we have been able to infer from outcrop data as well.

There is some gravity and magnetics that indicate we definitely have a basinal sequence in here, and the reefs are developed within that basinal context.

The blue on this map represents the oldest occurring reefs that we see. Those are Pennsylvanian in age. The purple is Permian-age reefs, what we've interpreted to be Permian age. And the green are Cretaceous-age reefs that we see.

The Cretaceous-age reefs are outcropping immediately to the east of the Humble well, so we have those in great context, we can work that into our system. And the Big Hatchet mountains are slightly to the northwest, and those reefs that are developed in the Big Hatchet Mountains are the same age reefs that we see developed in subsurface here.

They are confirmed by seismic data. We have two -- three lines that are shot in the area. We have two lines shot by Harvey data -- we have Harvey data in here that we've reprocessed -- and that data, the north-south line is represented by the blue line running up through the center of the map. And then there's an east-west line represented by a blue line that's diagonal here.

There's a GSI line that's diagonal through the area northwest- -- I mean northeast-southwest through the area, and that's a GSI line of lesser quality than the Harvey data.

The Harvey data is very dramatic in the reef development, and that's why our location, our initial location, is placed there, directly on that line, on one of the Permian-age reefs, the Abo-age reefs.

Q. If we look at the reef distribution as mapped, is it your opinion that these reefs are potentially productive throughout the unit area?

A. Yes, it is. The additional objectives in here, there's onlapping beds, there's truncated beds, and there's depositional terminations at the -- in equivalent beds to the -- equivalent-age beds to the reef sections that develop potential traps throughout the entire region.

Q. Would you refer to what's been marked Hughes Exhibit Number 10 and review that for the Examiner, please?

A. Exhibit Number 10 is an AFE generated by Dan Hughes Company for the initial well to be drilled. That well will be located in the southwest southwest of Section 26 of 32 South, 17 West.

As you can see from the numbers here, we're anticipating a dryhole cost of $439,000, completion cost of $272,000, for a total cost -- well cost, of $711,000.

Q. And how soon do you plan to spud the well?

A. The well is scheduled to spud December 15th, and as mentioned earlier, we have Patterson rig available for that.

Q. Is Hughes Exhibit 11 a written summary of your geological presentation?

A. Yes, it is. I have summarized the geologic -- regional geology, the geologic depositional histories, et cetera, for all that we've done in this area.

Q. And what conclusions have you reached from your geological study of this area?

A. Number one, that we do have pervasive plays that we can make. We're very excited about the potential in this area. Those pervasive plays would cover the entire unit area as we've got it proposed.

Our initial well will evaluate at least two, maybe three, of the most prominent objectives, and it would be an efficient way of developing these reserves in this part of the country.

Q. If you are able to develop these reserves under a unit plan, in your opinion will that result in the most efficient development of the reserve?

A. Yes, it would. The remote nature of this, it's important that you get scale and scope.

Having this in a single unit, a single operator

facilitates getting large-scale operations in this area. So yes, it would, it would protect the correlative rights of mineral lease owners.

Q. And if you develop this area under a unit plan, will that also enable the Dan A. Hughes Company to minimize surface disturbance?

A. Yes, it would.

Q. In your opinion will approval of this Application be in the best interest of conservation, the prevention of waste and the protection of correlative rights?

A. Yes.

Q. Were Exhibits 8 through 11 prepared by you?

A. Yes, they were.

MR. CARR: May it please the Examiner, at this time I'd move the admission into evidence of Hughes Exhibits 8 through 11.

EXAMINER JONES: Any objection?

MR. BRUCE: No objection.

EXAMINER JONES: Exhibits 8 through 11 will be admitted.

MR. CARR: And that concludes my direct examination of Mr. Kornegay.

EXAMINER JONES: Okay, go ahead.

MR. BRUCE: I just have a couple of questions at this point, I may have a couple more later.

EXAMINATION

BY MR. BRUCE:

Q. But is it fair to say, Mr. Kornegay, that what you're saying is, there's three to four zones that would be potentially productive across the entire unit area?

A. Yes, there are.

Q. And the deepest -- in your write-up you talk about the Ordovician through Mississippi age. What would be the deepest?

A. The deepest potential horizon in here is the El Paso, which is equivalent to the Ellenburger. It is Ordovician in age. There's also Montoya above that.

In drilling this, we decided not to go to that depth initially but try to evaluate the Percha shale. That has the -- for a regionally extensive unit, the Percha shale represents the best option.

Q. Across the unit, what would be the depth of, say, the Ellenburger?

A. It's going very radically across the unit. In the Humble well, the Ellenburger is at -- I think it's close to 13,100 feet. I've got it on the map here. El Paso, the El Paso is 13,214 to the top of it. And it will be as shallow as 6000 feet on the very western edge.

Q. Okay, that's what I was wondering, yeah.

A. Yeah, it varies radically across.

MR. BRUCE: I might have a couple more later, but I pass the witness to you, Mr. Examiner.

EXAMINATION

BY EXAMINER JONES:

Q. Okay. This is real interesting, and I'll bet it's a real fine play for a geologist.

A. Oh, it's exciting, it's exciting.

Q. I bet. Well, why since the '50s hasn't somebody else done something?

A. The seismic data that we obtained, the Harvey data, had been shot on a proprietary basis by Harvey. He died, and the data was never marketed. So we were able to find it, and we found it in his widow's garage.

And we got the data and it is amazing, the quality of that data. It was shot in '82 and it has excellent quality. We did reprocess it and take out some of the noise, and there were some issues with the data, but we've got that resolved. You know, we've got it migrated properly, and those reefs are dramatic. They are dramatic.

Q. And the whole source is the Percha for everything?

A. No, there are -- Sam Thompson's report, he identified a number of potential sources, and there are indigenous sources in the Horquilla, as well as up in the Epitaph and the Cretaceous sections. So this is truly a

frontier play and very exciting. We can potentially open up a whole new area.

The Cretaceous, does it have some coals and --

A. We did not -- we did not find any coals in the outcrop, and it does not appear that at least the section which drilled in the Humble well has any coal. We are not anticipating coal sequences in this area.

Q. That Percha, is it -- As far as actually trying to develop a shale, you know, the Michigan's got that shale with the -- Are you going to have to do some horizontal drilling in this?

A. It may come to that. But as we all know, the Barnett has been something that's been exploited extensively with vertical drilling. Horizontal drilling has enhanced that recovery.

We're not exactly sure what we're going to do or what we'll encounter in terms of the shale gas content. All the samples, everything that we've got, have been old samples, have been on the self for decades. So all your gas content numbers, anything that you can do to really enhance your reserve numbers, they're just not available. And the outcrop is the same way.

But we are excited about the TOCs and the relative thermal maturity and projecting what those original TOCs were -- that's total organic carbon, for

anybody. The TOCs would represent a significant volume of gas has been generated and expulsed in this area. So we're hopeful that there's a tremendous amount of that still in place in the shale.

Q. Now how warm -- how hot was the gradient?

A. I think the bottomhole temperature in the El Paso well was like 312, something like that. But there is a -- it has fairly high thermal maturities in the deeper portions. But what we have found is, there's Tertiary and Quaternary volcanics in the area, volcanism, and that locally -- local proximity to those is where we get the much higher thermal maturities. And it appears that those sediments that are somewhat removed from those high thermal maturity areas are relatively normal thermal maturity, so...

Q. Okay.

A. But we do anticipate that most of the objective horizons will encounter gas, dry gas.

Q. Okay. Do you think you might encounter some CO_2 along with this? Or -- hopefully not too much.

A. The possibilities with carbonates are always there. We have no idea what to expect in terms of what those hydrocarbons might be and their composition.

Q. So you've got a source rock and you've got -- Now as far as your traps go, you think those reefs are decent

traps?

A. Yes, they -- We see on the seismic good evidence that they are sealed. We also have a Tertiary sedimentary layer that appears to seal the units as well, so -- and there's onlapping, there's a lot of things going on that -- There are just a multitude of potential traps --

Q. Okay.

A. -- within the area.

Q. So what is your risk factor on your first well?

A. Well, we'd like to --

Q. Commercial discovery risk factor?

A. You know, it is a risky -- risky venture. And you know, with all risky ventures you need to have something -- enough momentum to make it worth doing.

Q. Uh-huh.

A. And Dan Hughes is an aggressive -- They're a wildcatter, they're well known for their successes in wildcatting. So we're excited about them operating the well, and as a risk -- You know, I hate throwing out the numbers because they're -- they're risky --

Q. Yeah.

A. -- you know, it's a very risky venture.

Q. Okay. As far as that, Dan Hughes would be the operator of the well, as far as the drilling operator also?

A. Yes, yes.

Q. Okay, so -- but do you know how -- Obviously they've got an AFE here, and you've probably looked it over. Only $70,000 to mobilize a rig over here, and -- that's demob and mob, I guess?

A. Now some of these numbers -- the contract with Patterson and everything are relatively new, so some of these numbers may vary.

Q. Yeah.

A. This was -- I think this is a month or so old. But yeah, some of those numbers are going to change.

Q. Yeah. Now who turned this in to our District 4 -- Did you guys, Stonebridge, do that, or did Dan Hughes?

MR. HUNNICUTT: We did not submit it to District 4, Dan Hughes did.

Q. (By Examiner Jones) Dan Hughes did. So Dan Hughes is the one that will have the bonds and all that?

A. Right.

Q. And they'll have to go through any restrictions District 4 has on all the -- the rules and regulations, I guess.

So you're not really prepared to talk, yourself, about the design of the first well, or are you? I mean, as far as --

A. What our objectives are and protecting the ground waters, we're going to set surface casing to a depth that's

sufficient to protect the groundwaters.

And the drilling ahead of the well, obviously we are going to be encountering -- there is no well in this area that has encountered the reefs the way we think they're developed out here.

Q. Okay.

A. So we're drilling something entirely new here.

Q. Uh-huh.

A. So in drilling the reef sections, we're -- you know, you could potentially have huge lost circulation zones. So we're going to be -- that may inhibit our ability to get to the Percha shale. But it's designed to go to the Percha shale and be able to test that. We will work at getting all the data we can out of the Percha shale and test the reefs as we go down, or any objective horizon.

Q. Okay. Do you have -- electric logs and mudlogging, do you plan -- and when do you want to start it in the well?

A. Okay, the electric logs we'll run from -- we'll have gamma-ray neutron -- or gamma-ray at least, from surface to TD. We will have neutron density, lithodensity, PE curves up to the base of the surface casing. We'll have the electric logs, and at this point we're anticipating that those will be induction logs. The induction logs were what was run in the Humble well, and that worked fine. So

the salinities and such are --

Q. -- low.

A. -- low, so we should be able to get by with an induction log.

The other thing that would be a nice log to have would be a dipole sonic, and from that we can tell stress regimes, a number of different things. But I anticipate that the reef reservoir is going to be so dramatic, if it's anything like the outcrop we're going to have tremendous reservoir properties, and that those will be displayed perfectly with a neutron density tool and a PE combination.

Q. Okay.

A. So more traditional logging suite. The sonic, we will get a good tie to our seismic. It's right on the seismic line, so we would generate a synthetic off that sonic and have a much better tie than what we've got with the Humble well.

Q. Do you have a lot stress faults out here?

A. There are faults, there's an interesting section. Down to the base of the reef section, it is relatively undisturbed, but there is an undisturbed basinal sequence in here which has surprised many people, and that -- Below that, though, is a very faulted horizon. So we get a number of faults below that, and that's where on the map we get the large structural feature at the center of the unit,

and some of the other structures that appear are below our Mississippian horizon.

Q. Okay. Did you -- I guess I better keep asking some questions here. Were you involved in setting -- designing the surface -- setting depth, or was that --

A. I think that was generated by Dan Hughes, but yes, I did have some input into that.

Q. Okay, and you decided 500 feet because --

A. Well, the Tertiary section has -- most of the wells -- Larry talked about how it was deep. That's relative to land guys.

Q. Okay.

A. It's really actually fairly shallow. Most of the wells are in 200 feet or -- they're relatively shallow wells out here that they're getting their surface waters.

Q. Okay.

A. We can adjust that surface casing to any depth that's required. What we were hoping to do, though, is get as much of the section logged as we could --

Q. Uh-huh.

A. -- to tie in seismic and everything else so that we get a very good synthetic tie. So we'd like to keep that as shallow as we can, to get a good log sequence up to the base of that surface casing.

Q. But you do have water-well -- drilling records

from water-well --

A. Yes.

Q. -- drillers out here?

A. Yeah.

Q. And if you encounter something below that, you can maybe see it on your induction log, your gamma-ray or --

A. Well, we know where the wells are and what they've been --

Q. Okay. But this first well that was drilled in the old days, boy, you must not have very good logs on that?

A. They have an old electric log, and there's a gamma-ray neutron log on that well, and it's a pretty good quality log --

Q. Okay.

A. -- for the old -- 1958 vintage.

Q. Okay.

A. And we do have some younger -- newer wells in the area. There's some Cockrell wells to the north that we've integrated into our study. We've also integrated some wells out of Mexico into our study. We have some wells off to the northeast that we've integrated as well.

Q. Okay. Are you going to sit on the well yourself?

A. I hope to.

Q. And you'd have a mudlogging -- two men mudlogging?

A. We want to have a 24-hour surveillance, two-man mudlogging unit. And through that -- I mean, as an exploratory well, we'd want them on early, and we'll just see what we get, and plan to test -- thoroughly test the well, any shows.

Obviously, you make decisions at the time of drilling whether it's something that merits a test or not, but we will be testing any and every objective that does merit a test.

Q. But you'll drill with fluid, you won't drill with air?

A. Right.

Q. And it won't be oil-based mud?

A. No.

Q. Okay. And what kind of surface pits and facilities are you planning on using? Do you know?

A. That I do not.

Q. Okay.

A. No.

EXAMINER JONES: Okay, I think I better pass it on to Carol here. We're --

MR. BRUCE: Could I ask a couple more?

EXAMINER JONES: Sure, go ahead.

FURTHER EXAMINATION

BY MR. BRUCE:

Q. The Hearing Examiner asked you about carbon dioxide. Is there any chance of helium?

A. That's another possibility. We have no idea what to expect in the composition of the gas. You know, other nearby -- McElmo Dome has a lot of CO_2 and some helium and stuff like that. It's in a carbonate environment. However, I think that thermal maturity level is a little bit different than what we're anticipating here, so I am hopeful our CO_2 volume is low.

Q. And are there any igneous sills or extrusives present in the unit?

A. There are igneous -- the Alamo Mountains are igneous lava flows. Not within the unit, there hasn't been anything reported. The seismic does not appear to have any sills in it. There is a well to the north of here that encountered a sill. It's the Cockrell well. There's a Cockrell well that they've encountered a sill.

But as you move away from those, your thermal maturity seems to be within normal ranges of a -- you know, we're in mid- to late-gas window through this area.

Q. What about the alluvium out here? What's the thickness?

A. Okay, that -- depending on your velocities that

you use on your data, we're anticipating that that's going to be between 500 to 700, maybe 1000 feet at the most --

Q. Okay.

A. -- at any particular place. And that varies as we move deeper into the Basin, it thickens and it thins towards the margins. We're towards the margins, and that alluvium, which is going to be the groundwater horizon, is thinner to the west side of the area.

Q. That brings up one final question. Maybe you're not the one to ask this, but would -- the 3-D seismic you're talking about, is that going to be a unit expense shared by the working interest owners, the consenting working interest owners?

A. The 3-D.

MR. HUNNICUTT: To answer your question, I don't think that they've made a determination of that yet. They have AFE'd it. As far as I know, there's been no determination of that.

MR. BRUCE: Okay, that's all I have, Mr. Examiner.

EXAMINER JONES: These are all one-eighth royalty state leases. Now the BLM, would they have -- are they, in fact, just now still one-eighth leases, or are they doing one-sixth --

MR. HUNNICUTT: I'm sorry?

EXAMINER JONES: If it was -- who would have been BLM land? Would they have done still one-eighth leases, or would they have done one-eighth -- or one-sixth leases?

MR. HUNNICUTT: These are one-eighth.

EXAMINER JONES: One-eighth, okay.

MR. HUNNICUTT: They would have been on the exploratory form --

EXAMINER JONES: Okay.

MR. HUNNICUTT: -- one-eighth.

FURTHER EXAMINATION

BY EXAMINER JONES:

Q. I guess I should just flesh this out a little bit. Those mountains to the west and the east, they outcrop the formation -- some of them outcrop in the Alamo, you said, and the Big Hatchet or the Little Hatchet?

A. (By Mr. Kornegay) Right, in the Big Hatchet Mountains, which are immediately to the west and northwest --

Q. Okay.

A. -- we have outcrops that range all the way from the El Paso -- it's a beautiful section, you can walk that entire section. It's pretty rugged terrain in a couple places, but you can walk all the way through to the Cretaceous --

Q. Okay.

A. -- and that sequence is exposed on the western side.

There's another mountain range, the Little Hatchet Mountains are to the north. Those also have some exposure as well. But we've got a great outcrop sequence.

Q. Okay. Do you have a strat section that you generated yourself with --

A. Yeah.

Q. -- the names of all these --

A. Yes, I do.

Q. -- strange names --

A. I failed to bring that with me, but I can get that for you easily.

Q. Could you please send it through Mr. Carr, maybe?

A. I will do that.

Q. And now -- so these formations are going to be -- through time, just like most basins, they're getting recharged --

A. Right.

Q. -- from the mountains surrounding the Basin; is that right?

A. (Nods)

Q. So some of them may or may not -- they're going to be different salinities as you go down?

A. Right. We anticipate -- and you can see a

profile, what appears to be a salinity profile, in the Humble well, and it is fresher water towards the surface and higher salinities as you go deeper. But it appears that that salinity increases relatively rapidly as we go deeper.

Q. Okay. These faults, are they running the length of the Basin?

A. They appear to be, and --

Q. Are they sealing faults?

A. We hope they're sealing.

Q. Okay.

A. But remember that a lot of the section that we're going to be looking at in this -- in our initial well program, is going to be relatively undisturbed by the faults, which is an exciting thing. That's always been kind of the knock against the Pedregosa Basin, is that it was a tectonically active basin, and the first concern is destruction of trap. How do you preserve a trap in something that's very tectonically active? Well, we have found an undisturbed portion of the Pennsylvanian-Permian-Cretaceous section, that appears undisturbed. It's exciting.

Q. So you're going to have sands and shales?

A. It's going to be dominantly carbonate.

Q. Carbonate.

A. Yeah, we're going to be dominantly in the carbonates. The Humble well is more in the marine side of that carbonate sequence --

Q. Okay.

A. -- and all of these rocks that we're going to be exploring for are more towards the marginal marine and reef development sequence.

EXAMINER JONES: The reef, okay. Okay, I don't have any more questions.

MR. CARR: Mr. Examiner, Henry Kremer [*sic*] with the Dan A. Hughes Company is here, and he has advised me that to determine the proper depth for the surface casing and to protect fresh waters, they intend to drill a water well first to establish the appropriate event.

He is present and would be willing to take the stand if you would like to question him on that, but that is how they intend to establish the depth of the water for the purpose of having an active casing program.

EXAMINER JONES: If he takes the stand, can I ask him more questions than that?

MR. CARR: You probably can, but I don't know what he might answer.

EXAMINER JONES: Okay, I would think that would be good. Do you have any more questions of this witness?

MR. CARR: At this time, then, we'd call Mr.

Kremer.

EXAMINER JONES: Okay. Mr. Kremer, would you please stand to be sworn?

(Thereupon, the witness was sworn.)

EXAMINER JONES: Okay.

J.H. (HANK) KREMERS,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARR:

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

A. It's John Henry Kremers.

Q. Mr. Kremer, where do you reside?

A. Beeville, Texas.

Q. And by whom are you employed?

A. Dan A. Hughes Company, L.P.

Q. And what -- Have you previously testified before the New Mexico Oil Conservation Division?

A. I have not.

Q. Could you review your educational experience and background as it relates to the oil and gas industry for Mr. Jones?

A. Certainly. I graduated from the University of Texas with a petroleum land management degree, I have worked five years for Conoco followed by 26 years working

for Dan A. Hughes Company.

I have been involved primarily in land functions. I have acted as a land manager for 23 of the 26 years and now I am vice president of land for Dan A. Hughes Company.

Q. Are you familiar with the Application filed in this case?

A. Yes, I am.

Q. Are you familiar with the proposed South Hueco Unit?

A. Yes, I am.

Q. Are you familiar with the Dan A. Hughes Company's plans for the initial development of this unit area?

A. Yes, most of them.

Q. And since we haven't had a chance to talk, if you -- I want to advise you that if you get into an area where you don't know, that's an acceptable answer.

But you are familiar with how Dan A. Hughes plans to go about drilling --

A. Yes.

Q. -- the initial well?

A. Yes.

MR. CARR: I would tender Mr. Kremer as an expert in petroleum land matters.

EXAMINER JONES: Objection?

MR. BRUCE: No.

EXAMINER JONES: Mr. Kremer is qualified as an expert in petroleum land matters.

Q. (By Mr. Carr) Could you review for Mr. Jones how it is that you plan to determine the water table in the area of the initial well --

A. Yes.

Q. -- for the purpose of determining an appropriate casing program?

A. In attempting to permit the well, we have -- your District Office has advised that they have no log records whatsoever in this area. We have undertaken a brief attempt to find some logs to show where the water tables are. We have been unsuccessful to date. We will do some more here in the next couple weeks. But in the absence of that, what we will do is drill the water well, log it, establish it, and then get the casing program at that point.

EXAMINER JONES: Okay, and the water -- Okay.

MR. CARR: I have no further questions of this witness.

MR. BRUCE: I have no questions.

EXAMINATION

BY EXAMINER JONES:

Q. Okay. Mr. Kremer, as far as the water wells you're going to drill, are you going to drill them with the

-- just -- are they rotary -- water wells, are they cable-tool drilling?

A. I don't feel I could answer that, I really --

Q. Okay.

A. -- can't at this juncture. There are water wells in the area --

Q. Okay.

A. -- and we are attempting -- we will attempt, through Phelps-Dodge, to ascertain if they have logs. We have not done so. This is evolving as we speak.

Q. Okay.

A. What I passed on is news from this morning. But we are prepared to drill the well first and log it as necessary, in compliance with whatever regulations your District Office --

Q. Okay, so you're going to localize the wells around it, so you know better where to set the --

A. Exactly.

Q. -- surface pipe --

A. Exactly.

Q. -- with water well drillers that are experienced in the area?

A. Absolutely. Everything -- Nothing is going to be brought from Texas at all, it's all going to be local.

Q. As far as the rig and everything, and the setup

on the rig, do you know anything about that?

A. No, not really.

Q. Care to say anything about it?

A. No.

EXAMINER JONES: Okay, that was the main purpose. Thank you, Mr. Kremer.

Carol, did you --

MS. LEACH: No, thanks.

MR. CARR: May it please the Examiner, that concludes our presentation in this case.

EXAMINER JONES: Okay. Mr. Bruce, do you have anything --

MR. BRUCE: I have --

EXAMINER JONES: -- else to say --

MR. BRUCE: -- nothing in this matter.

EXAMINER JONES: -- about this?

Okay, can we go off the record just a second?

(Off the record at 11:06 a.m.)

(The following proceedings had at 11:07 a.m.)

EXAMINER JONES: Okay, let's go back on the record, and we'll take Case 13,022 under advisement.

MR. CARR: Thank you, Mr. Examiner, and you're aware of the tight time frame?

EXAMINER JONES: I'm --

MR. CARR: We will --

EXAMINER JONES: You know, I've heard that a lot lately.

MR. CARR: We'll be providing the information that you requested from Mr. Kornegay immediately, and if you have any questions please call us.

EXAMINER JONES: And that's a PDF file you sent?

MR. CARR: Isn't that what you've asked for in the past?

EXAMINER JONES: Actually, I would rather have a Word file.

MR. CARR: We'll send you a word file.

EXAMINER JONES: We don't have converters at the State.

MR. CARR: Thank you very much.

(Thereupon, these proceedings were concluded at 11:08 a.m.)

* * *

CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL November 2nd, 2007.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 16th, 2010