Order No 1-127

1-27

1 of 2

BEFORE THE COLORADO OIL AND GAS CONSERVATION COMMISSION

STATE OF COLORADO

Cause No. 1

Docket No. 5-4

ORIGINAL

REPORTER'S TRANSCRIPT OF HEARING

PUBLIC HEARING IN THE MATTER OF

DOUGLAS CREEK FIELD, RIO BLANCO COUNTY

The hearing in this matter commenced on Monday, May 18, 1992, at the State Education Building, Room 101, 201 East Colfax, Denver, Colorado 80203, at 11:00 a.m.

COMMISSION MEMBERS

TRUMAN ANDERSON, Chairperson

LOGAN MacMILLAN

JOHN CAMPBELL

MARTIN BUYS

APPEARANCES

FOR THE APPLICANT, CONOCO, INC.:	WILLIAM G. ODELL, ESQ.
FOR THE PROTESTANT, DKM RESOURCES, INC.:	STEPHEN J. SULLIVAN, ESQ.
COMMISSION STAFF:	DENNIS BICKNELL Director

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DENVER, COLORADO - MONDAY, MAY 18, 1992 - 11:00 a.m.

CHAIRPERSON: Cause No. 1, Docket No. 5-4, the Douglas Creek Field in Rio Blanco County. The Applicant is Conoco, through their attorney William Odell.

It's a request to allow a well to be drilled in an exception location 2,380 feet from the south line and 60 feet from the west line in the Northwest Quarter of the Southwest Quarter of Section 31, Township 2 South, Range 101 West, for production from the Mancos "B" Formation, and the Application has been protested by DKM Resources, through their attorney Stephen Sullivan.

Why don't we start with taking appearances.

MR. ODELL: Yes. For the record I am Bill Odell. I represent Conoco, Inc. in this matter.

MR. SULLIVAN: I'm Steve Sullivan. I represent DKM Resources, Inc.

CHAIRPERSON: It would help me if both of you would do, even if it's just one paragraph, an opening statement as to what you want to do, what you're going to show.

MR. ODELL: Yes, Mr. Chairman.

OPENING STATEMENT

BY MR. ODELL:

On behalf of Conoco, Inc., this is an Application for

a location exception. What we have involved here are two Federal units -- Douglas Creek Unit on the south, bounded immediately on the north by Little Dragon Trail Unit. These are both Federal sites.

Under Rule 318 of this Commission, wells at a depth less than 2,500 feet must be located at least 200 feet from the outer boundaries of any of the lines of any Federal unit.

The well, which is the subject of this Application here today, is to be drilled to and produced from the Mancos "B", like in Baker, Formation, which is found in this area at a depth of less than 2,500 feet.

So, under Rule 318, we are required to have a 200-feet setback. As you can see on this map, our well is going to be located where the two units come together. You can see this survey, anonymous survey situation, that leaves that little ear sticking up, offsetting sections. We come within the 200-foot tolerance to the north. We are having to crowd the Little Dragon Trail Unit to the east. In fact, the location would be 60 feet east of the boundary line of the unit.

The reason for our request is very simple: Topography. As the evidence will show, we have some pretty outstanding topography out there. It looks real pretty on postcards, but it's not very good for drill site locations.

I think our evidence is going to show that it's necessary to drill this well to recover gas that won't otherwise

be recovered without the well.

CHAIRPERSON: Mr. Sullivan?

OPENING STATEMENT

BY MR. SULLIVAN:

Mr. Commissioner, basically there's a disagreement in this matter on what the drainage of these wells are. Based on the information that we've got, the existing wells in this area are sufficient to drain the area that would be drained by the proposed well.

The area has just recently been infilled from 160's to 80's within the last three or four years, and at that time the parties determined that the 80's would actually accelerate production rather than increase the total amount of reserves recovered, we think, in effect, going from 80's to 40's, typically in an area where you're going to have problems of allocation on unit boundary when it hasn't been done on the rest of the unit is a bit hasty, and we feel in view of the fact that it appears upon the evidence we have that it's -- this -- these reserves would be drained, then we think that the well at this time is unnecessary.

I'd also like to request that we could possibly move the easel back, because if those folks are going to be standing on this side, we won't be able to see it at all.

CHAIRPERSON: Whatever works for you.

MR. ODELL: I was going to request leave of the Commission to cross examine my witness from that point over there, just so I could see it, because I think it's important that the Commission see some of these larger exhibits up fairly close.

It's very graphic in making our case.

CHAIRPERSON: All right.

MR. ODELL: Is this satisfactory?

MR. SULLIVAN: If they stand off to the side, yeah, or they stand it off to the other side of the exhibit, they wouldn't blocking us.

CHAIRPERSON: Mr. Odell.

MR. ODELL: Yes, sir. I request leave of the Commission to conduct my direct examination from over there, if I may.

CHAIRPERSON: Please do.

MR. ODELL: I have two witnesses I'd like to have sworn at this time: Ms. Julie D. Crumpler and David Pellatz.

CHAIRPERSON: All right. Would you both please state your name for the record.

MS. CRUMPLER: Julie Crumpler, 2107 South Mitchell, Casper, Wyoming.

MR. PELLATZ: David Pellatz, 3105 South Poplar, Casper, Wyoming.

CHAIRPERSON: Okay. Please raise your right hands.

(Continued)

JULIE D. CRUMPLER

and

DAVID W. PELLETZ

witnesses on behalf of the Applicant, were duly sworn.

MR. ODELL: I would like to call as our first witness, Ms. Julie Crumpler.

JULIE D. CRUMPLER

a witness on behalf of the Applicant, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. ODELL:

Q. Please state your name and your profession for the record.

A. Julie Crumpler, and I'm a landman with Conoco.

Q. Have you prepared a resume of your work experience and educational background to submit to the Commission?

A. Yes, I have.

Q. Has that been submitted?

A. It should be submitted at this point.

Q. Ms. Crumpler, what is your position with the Applicant?

A. I'm a landman with Conoco.

Q. And in your land work with Conoco, have you worked in

the Douglas Creek area?

A. Yes, I have.

Q. Are you familiar with both Douglas Creek and the Dragon Trail Units?

A. Yes, I am.

Q. You have not previously testified before this Commission as an expert in the field of petroleum land management?

A. No, I have not.

Q. Would you briefly tell the Commission what your work experience in this area as a landman has been?

A. I've been working in the Douglas Creek Arch Area for the last two years, which is my entire employment with Conoco, and my experience in the area has included not only lease review but expansion requirements, acquisitions in the area, and just general inquiry into all the agreements that govern this area.

Q. And are you directly involved in the land work that led up to the proposed drilling of this subject well?

A. Yes, I am.

MR. ODELL: I would like to propose that the witness be qualified as an expert witness in the field of petroleum land management.

CHAIRPERSON: And the witness has had two years' experience?

MR. ODELL: Yes, sir.

CHAIRPERSON: As a landman?

MR. ODELL: Her testimony will not be opinion testimony. It's going to be fact testimony, so if there's any hesitancy to qualify her as an expert, I would just let her testify as a witness.

CHAIRPERSON: All right. I think we can accept her as an expert, understanding that she's had two years' experience in the area.

Q. (By Mr. Odell) Ms. Crumpler, have you prepared what's marked as Applicant's Exhibit Number 1?

A. This exhibit was prepared under my supervision.

Q. Please tell the Commission what is shown on that exhibit.

A. What that exhibit is presenting is the Douglas Creek Unit and the Dragon Trail Unit, and what I'm going to do with the pointer is outline the unit for Douglas Creek so everyone can get a better view of it.

It comes over here (indicating), and as I come up on this side, you can tell that the Dragon Trail Unit is on the western side, and that represents the outline of the Douglas Creek Unit, Dragon Trail Unit north.

Q. Is Conoco the operator of the Douglas Creek Unit?

A. Yes, we are.

Q. And insofar as the Mancos "B" Formation is concerned, does Conoco own the full working interest in the unit?

A. Yes, we do.

Q. What about the Dragon Trail Unit?

A. The Dragon Trail Unit, Conoco is the operator, and we have approximately 76 percent working interest in that unit. The remainder is with DKM, and then a minor portion is with Celcius.

Q. What about the ownership of the minerals and royalty underlying both units?

A. The Federal Government.

Q. So the Federal Government is the owner of the royalty on both sides of the unit boundary?

A. That's correct.

Q. Will you identify for the Commission the location of the exception well on that map.

A. Number 65.

Q. Is that well in an area that is marked by a survey offset where the sections are offset slightly?

A. Yes.

MR. ODELL: I would like to offer Exhibit Number 1 into evidence.

CHAIRPERSON: It is admitted.

(Applicant's Exhibit 1 was admitted into evidence.)

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

CHAIRPERSON: Mr. Sullivan:

MR. SULLIVAN: No questions.

CHAIRPERSON: Questions from the Commission?

EXAMINATION

BY COMMISSIONER BUYS:

Q. How many other wells has Conoco drilled here in the last couple of years?

A. I'd have to defer that to Dave Pellatz.

Q. Have they drilled other wells here in the last two years?

A. Yes, we have. And in fact, for our 1992 drilling program, Number 56 is one of seven proposed wells, and I've also had these plotted on this exhibit, and we can go through them: Number 57, 55, 50, 49, 51, and 54, so that it's one of seven of our drilling programs for 1992.

MR. BUYS: Thank you.

EXAMINATION

BY THE CHAIRPERSON:

Q. You said that Celcius also owns an interest in the Dragon Trail Unit?

A. Yes, they do. Their interest is -- you don't have a full picture of the Dragon Trail Unit. You just have the part where it brushes up against the Douglas Creek Unit.

The Celcius interest in Dragon Trail Unit is to the far western part of the unit, and they have -- I think it's a 160-acre tract in a 10,000-acre unit.

Q. So they have no interest in the area in question today?

A. No. Right. Their lease is way on this side of the unit (indicating).

CHAIRPERSON: Mr. Odell, anything else?

Okay. Thank you.

MR. ODELL: I would like to call as my next witness Mr. David Pellatz.

DAVID W. PELLATZ

called as a witness on behalf of the Applicant, having been previously duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. ODELL:

Q. Please state your name and your profession.

A. My name is David Pellatz. I'm a petroleum engineer working for Conoco, Inc.

Q. Have you previously testified before this Commission as an expert in the field of petroleum engineering?

A. No, I have not.

Q. Have you prepared for this Commission a resume of your educational background and work experience?

A. Yes, I have.

Q. I would like for you to briefly summarize for the Commission what that has been.

A. My involvement in this area, the Douglas Creek Application, including the Douglas Creek Unit, began basically the mid-part of 1986.

Through the drilling that we've had out here, there was a question earlier to the drilling we started in 1988. I was involved in both picking the locations and then doing the completion work for the 30 wells that were drilled in the Douglas Creek Unit from 1988.

In 1989 I participated in the project planning again, up and through the completion of the wells for 44 wells in the Dragon Trail Unit.

Since that point I spent a couple of years in Houston working in our gas product group, again involved with the gas processing side of the Dragon Trail Area.

I've been back in Casper for approximately four or five months and again am working on the Douglas Creek Area in the area of both reservoirs, doing reserve determinations, et cetera, as well as regulatory matters.

Q. Is the development program in the Douglas Creek Unit at least partially under your supervision and control?

A. The 1992 drilling program, I've provided information on, and yes, it is partially under my supervision.

Q. I see from your resume that you have degrees in both petroleum engineering and geology.

A. That is correct.

Q. Are you a member of any professional associations?

A. Yes. I'm a current member of the Society of Petroleum Engineers.

Q. Have you testified as an expert before any other administrative bodies?

A. No, I have not.

Q. A copy of your resume has been submitted to the Commission?

A. Yes, it has.

MR. ODELL: I would like to move his admission as an expert in the field of petroleum engineering.

CHAIRPERSON: His qualifications are accepted.

Q. (By Mr. Odell) Mr. Pellatz, have you prepared what is marked as Exhibit Number 2 for submission to this Commission?

A. Yes, I have. I'll be going back to Exhibit Number 1 in just a moment, but I wanted to set the stage a little bit on Exhibit Number 2.

Hopefully -- I know that the copy was rather small in your hand-out, but we've enlarged the topo map for this part of the area of interest.

The unit that you see, this magenta line that runs across the dividing page here, is the dividing line between the

Douglas Creek Unit to the south and the Dragon Trail Unit to the north.

The proposed location, again, is this red circle located here at Douglas Creek Number 56 (indicating). You can see up there.

Perhaps you can see up to the top. The green boundary around that is the actual site of the well pad itself, where the red circle represents the actual well. The contour lines on this map here where I've highlighted it in the red are ten-foot contour lines.

The purple here (indicating) that you can see denotes a 50-foot contour line. As we go through the series of photographs which make up the next several exhibits, I'll be mentioning and refer back to these points labeled A, B, C, and D.

These are points that I stopped and took different photographs so that you can kind of have an idea as we walk up the hill where they were.

We have reference Point 4-A and 5-A. Again, those points will also be identified on your exhibit.

They are reference points, so that again you get a feel for where this location is. They were taken by taking the corner of a location -- in this case 5 -- walking out due south to the cliff face, and then I set up a marker that we can pick these up in the photographs.

The same procedure was followed with 4-A. It's just

straight south of Corner Number 4 on the location which we'll also go through in further exhibits.

But I'd like for a -- if I could for a second, to return to Exhibit Number 1. As Ms. Crumpler has indicated, we have a drilling program proposed in the Douglas Creek Unit for 1992. As you can see, and as she pointed out, the wells that are in the current drilling program, what we've done is gone back through where there appeared to be holes in our 80-acre spacing.

As you can see, and as I'll show in the future exhibits, the topography out here really does control the well locations, and we haven't been able to follow a standard 80-acre spacing program.

We've tried to get, for 80-acre spacing, the two wells necessary in the quartersection, but we haven't been able to do that evenly, so the Well Number 56 is one in a series of our current drilling programs where we've gone back in to see areas that we don't feel are being adequately drained at this point, and are then thus proposing these wells to adequately drain that area of the reservoir.

Q. Referring you back to Exhibit 2, tell the Commission the origin of that topographic map.

A. The topographic map that you see here was derived from the GPS System. It's the Global Positioning System, where we went out and, using the satellite, triangulate to the section

corners, and we can adequately identify the sections of this area.

Because of its roughness, the original surveys tended to have some errors introduced, and we wanted to go back through and verify that. The contour lines and other physical features that you see on the map were digitized off of aerial photography. That process included a reconciliation of the map, the topo map that you see here, back to the USGS quadrangle for this area, to verify that the physical features were the same.

Q. How close is your proposed well location from the north boundary line of the Douglas County Unit?

A. The proposed location is approximately 260 feet from the north boundary line of the Douglas Creek Unit here (indicating). It's approximately 60 feet from what would make up the west boundary line of the Douglas Creek Unit as well.

Q. You made reference to your so-called drilling pad. Will you tell the Commission a little more about what's involved in the establishment of a drilling pad.

A. Right. If you'd like to turn to Exhibit 2-A -- and I apologize that we don't have a blow-up of this -- you can see the location, which is basically just a large -- or an enlargement of this area that I've highlighted here in green (indicating), giving a layout, physical layout of the arrangement of the necessary pieces of equipment to drill a well.

We have -- let me grab a copy for myself here -- the

layout -- we have a slightly cropped corner that faces down to the southeast.

As you can see, as we move back to the -- what on the map here would be to the southwest, we have the reserve and Louie pit. That's used to contain drilling waste.

It's also used to provide basically a catch point for the air and the dirt that's produced while drilling those wells. As you can see on the exhibit, we have a layout including the drilling platform surrounding the well, which is shown here on orange.

We've got the layout then of the other auxiliary pieces of equipment that are necessary, including the compressors to air drill those wells, and the pipe rack out to the front, et cetera.

This is a pretty typical layout. In fact, we've standardized on this layout for all of the wells in Douglas Creek, in Dragon Trail, and then our other properties in this area.

It's about the smallest layout that we can adequately fit all of the drilling equipment onto, and then when we're ready to fit all the completing equipment onto as well -- we've done this really in an effort to minimize costs, and we also don't want to disturb any more ground than we absolutely have to.

Q. Is it necessary in a drilling of a well that you have some leeway in all 360 degrees to move around the actual well

core equipment and machinery?

A. It's necessary to provide access basically to full circle around the well.

We also, for safety concerns, need to provide at least some margin of safety in case there is some kind of an accident or other unforeseen event, to allow for safe access or exit from the well pad itself, and so those are all the requirements when we physically lay out the location, to make sure that we've met all of those requirements.

Q. Has the Bureau of Land Management made its on-site inspection relative to this drilling pad and location?

A. Yes, I believe they have.

Q. And have they given you tentative preliminary approval?

A. Yes. The procedure that we follow with the BLM is that we will go out with one of their representatives to aid in selecting the site, and then also in the actual process of orienting the well location, again to minimize damage to the environment, to provide for safe access and exiting.

Also to make sure that we have, for example, no spillage of material over cliff faces into streams, et cetera. At the time that we have them out on location, they will give preliminary approval, of course, subject to a final finding when the APD is approved.

Q. Anything else you feel is pertinent and relative to Exhibit Number 2 at this time?

A. No. I believe I would like to go on to the photographs.

Q. Okay. Let me ask you to identify your Exhibits 3 through 11. What are those exhibits?

A. Exhibits 3 through 11 will be a series of photographs, either taken by me or under my supervision, of the site from various locations, showing the location of the proposed well and some of the topography surrounding that area.

Q. Let's go to Exhibit 3, then, and I'll ask you to -- do you have blow-ups of those that you can submit to the Commission?

A. Yes, and if I could, I was planning on setting them down, but I'm afraid they set them down here. No one will be able to see them. Do we have a clip?

What I'd like to do is leave Exhibit Number 2 up, which will serve as the locator map for this series of photographs, Exhibits 3 through 11, and just basically walk you up from the bottom of the site, which is down here at A by these buildings, up to the top, stopping at Point B and C, on up to 4-A, where we look back down the hill, and then looking around at some of the sites up on the top of the location itself (indicating).

Exhibit Number 3, as you can see, starts out -- we have the building here labeled Point A, Point 4-A and 5-A, and as you can see in your hand-held exhibits, there are marks that

are -- that we can use to identify those points; set up basically a dead tree on 5-A, and then a flagpole on 4-A, so that I can identify these as we went up.

Q. Are those points the approximate points of the boundaries of your drilling pad?

A. As I mentioned earlier, the points are derived from the actual corners of the location.

All I've done is taken them due south. For example, the distance between Point 4, which is the actual corner of the location, and Point 4-A, is approximately 46 feet.

The point from 5, which is at the center of the location, to 5-A, is approximately 75 feet.

I've done this just so that we can refer back to where the location would sit, slightly back off of the cliff face. As I mentioned earlier, the corners that you're seeing here are basically ten feet in the red, 50 feet in the purple.

This cliff face from the ground that we're standing on, up to the top, is approximately 250 feet. As we walk up, you'll be able to tell that it's a series really of very steep, sharp cliffs, if you will, ranging anywhere from about 50 to 30 feet high, followed by some tallis slopes of anywhere from 50 to 100 feet.

I'll go ahead, and as we walk up, telling you where we were standing.

Exhibit Number 4 is slightly further up the hill.

We've moved somewhat to the northeast, climbed approximately 100 feet, and are again looking back at the location, Points 4-A and 5-A.

The point that we've used for reference for Point B is this little pointy tree here (indicating), which will be showing up in some of the additional photographs.

As we get a little closer to the location that you can start to see the development of this cliff face here. This face is approximately 15 to 20 feet. The location again will set right up on top of that, back from the locators, Points 4-A and 5-A.

Exhibit Number 5 moves you up a little closer. We move from Point B to Point C. Again, you can see a little closer view of what's now developing into a cliff face here between Points 4-A and 5-A.

Again we're looking approximately back to the west, back into the location site.

And finally, Exhibit Number 6 was taken from the top of the location at Point 4-A, standing on the cliff that we've just been looking at.

The flagpole is just off to the right here out of the picture (indicating), and we're looking back down that same cliff face that we've just climbed up, seeing Point C, Point B, the pointy tree here (indicating), and Point A, the shack that you can see also on the topo map.

Again from the top here, we're looking down approximately 250 feet down to Point A.

Exhibit Number 7, then, is stepping back again straight south from 4-A back to the actual corner of the location, and this is the corner stake put in by the surveyor to note the corner of the location.

This would be on the northeast side of the location, this point on the top map here labeled 4 (indicating).

This photograph was taken basically looking to the east, southeast. Again we can see reference Point B. The distances from this corner point to the cliff edge that you can see in the center of your photograph, just above the stake, was approximately 12 feet.

We moved that corner as close to the edge of the cliff as we could and still have a relative safe location.

As you can see from the earlier exhibits, this face here that we're talking about is that same 15 to 20 feet cliff face, and we're just standing from this photograph 12 feet back from the edge and looking down out to the east, southeast.

As we move around, the location is still staying up on top of this clear area shown here in the topo map (indicating) at the well plat.

On the well pad, itself, approximately the center, Point Number 5 identified here on Exhibit Number 2, the point that we've been referring to as 5-A is out on the cliff face,

unfortunately.

The dried stump that I've used as a marker is behind this tree. It's located right there (indicating), again approximately 75 feet from Corner Number 5 out to the face.

Moving on around the location, we have Exhibit Number 9, which is Corner Number 6, being C here in the corner of the photograph looking out from Corner Number 6.

Basically somewhat south -- or somewhat east, pardon me -- of due south, you can see Point D, which we used as another reference point on the cliff face itself. Point D is approximately 57 feet from the corner point indicated here, Number 6 (indicating).

On Exhibit 10, we moved out to Point D, standing on the cliff face.

This is the view, basically looking east from the point denoted D along the cliff face, again to kind of refer you back to where we were in the earlier exhibits.

We would be looking pretty much following the well pad layout here, looking almost due east along the face of this cliff.

As you can see, it doesn't provide much room to get out and do anything on this slope.

The last exhibit that I'd like to show you with the photographs is Exhibit Number 11, and on Exhibit Number 11, we'd move back to the northeast corner -- pardon me -- to the

northeast corner, I guess, here at the point labeled Number 2, and have a view -- pardon me.

We have a view off to the east. It's approximately 48 feet from what is located here as Corner Number 2 to this point here, and you can just very faintly see what is the cliff edge there.

Unfortunately, due to the heavy vegetation in that direction, you couldn't get a real clear shot of that cliff face there.

Q. What are the dimensions of your well pad?

A. The well pad dimensions from the center of the well in this case -- and we'll use Douglas Creek 56 reference directions -- this direction would be down to Point 5 from the well, would be 45 feet.

Up to the north from the center of the well to this northern edge of the well pad would be 80 feet.

From the center of the well out to the easternmost site here would be 140 feet, and then from the center of the well back to the western side would be 130 feet.

In total that gives you a location that's approximately 125 feet, and it narrows to 270 feet in the long dimension.

Q. Actually in fact, to get to that well pad, part of that well pad has to be located over in the other unit; does it not?

A. That's correct. As you can see, the boundary line here, part of the actual well pad will fall within the Dragon

Trail Unit.

Q. Did you actually go out on location and mark these distances and sight these pictures yourself?

A. Yes, sir, I did. I was on all of the sites that you've seen here in the exhibits. I did all of the measurements as well; took a compass out so that I could get an approximation for which direction we were using, as well as correlating that back to the topo map.

Q. As a physical matter, is this the only place in that general area that a well pad could be located?

A. Yes. We have basically no room. We moved it as far as you could see from the earlier exhibit, and I'll just go back and refer to that for a moment.

Exhibit Number 6 shows again -- pardon me. Let's switch to Exhibit Number 7, which shows the Corner Number 4.

As I mentioned, it's approximately 12 feet from Corner Number 4 to this cliff face. We've showed this location to the far east as we can. There, realistically on this site, is no way to get any significant movement away from the lease line.

Q. Let's go on to your Exhibit Number 12. I'll ask you to identify that and tell the Commission what's shown.

A. This is Exhibit Number 12. It's a blow-up of the quarter quartersections of interest, directly surrounding Location Number 56. Again, the unit boundary runs from what would be the west side of this blow-up corner here and moves

over to the east side.

Again, the Douglas Creek Unit is to the south, the Dragon Trail Unit is to the north.

The proposed location of Douglas Creek 56 is shown here in the large circle (indicating). The pertinent distances from the lease lines are also shown. As you can see, we're 260 feet from the northern boundary of the Douglas Creek Unit. We're 60 feet from the western boundary of the Douglas Creek Unit. We've also shown on this exhibit the 200-foot buffer zone, if you will, that we will be required to stay outside of.

As you can see, we are outside of this buffer zone in the northern direction. We do fall within the buffer zone here in the westernmost direction (indicating). We fall within about 140 feet inside that buffer zone.

Q. Let's go on to your Exhibit 13.

A. Exhibit Number 13 is a structural map, again of the area of interest, showing some of the Douglas Creek Unit. You can see it lightly outlined here as I'm drawing around it again (indicating), the same unit out that was -- outline that was shown in Exhibit Number 1.

The Douglas Creek Unit lies to the south of Douglas Creek 56. The Dragon Trail Unit lies here to the north (indicating), that proposed location circled with the black dot here on the exhibit.

The contour interval on the base of the Mancos "B",

which is what we're looking at here, is 50 feet.

This map just shows the continuity of the Mancos "B" structure. We do have several faults through the area, but in general, the Mancos "B" is a blanket-type formation on the Douglas Creek Arch, and we find it laying throughout our area of interest, and certainly underneath Well Number 56.

As you can see from the map, we project two faults on either side of the location of 56. These are probably going to be outside of the area, and we should not encounter those within -- or in drilling.

Q. Does structure play any significant part in this accumulation?

A. No significance in the original deposition. We do find that we tend to have somewhat better wells located along the faults and that the point of maximum flexure on the structure, but other than that, it really plays no significant role. Certainly we don't anticipate anything for Douglas 56.

Q. Would you tell the Commission a little bit about the nature of the Mancos "B" Formation, type and character.

A. The Mancos "B" Formation in the Douglas Creek Unit is a formation of approximately 400 feet thick. It's Upper Cretaceous in age.

The 400-foot thick section is made up of very finely interbedded sand and shale. These sand and shale laminae can be anything from a few grains on up to sections that are, perhaps,

in some parts of the field, five to six inches in thickness.

However, typically we anticipate seeing something that is under a quarter of an inch, as far as the actual sand lenses, if you will, thickness.

The formation here is relatively tight. In fact, the Commission in NG-14 has found that this area underneath the subject well to be a tight designation, which would be permeabilities of less than .1 millidarcy.

Q. And because of the permeability, is the ore drainage quite often restricted, or in most cases restricted, your drainage area?

A. The drainage area does, as a function of the reservoir, does tend to be restricted due to the tightness of the formation, yes.

Q. Let's go to your Exhibit 14.

A. Exhibit 14 illustrates what we've seen in the formation. We've mentioned that this is a relatively tight area. We do have some -- Exhibit 14 shows these two well pairs that we have not seen interference in. Let me go through them now for you.

The first well pair that I'd like to discuss is Douglas Creek Unit Numbers 23 and 28. As you can see on the map, they're located approximately 979 feet apart. That's just slightly more than what a 20-acre spacing pattern would be if it was a typical pattern.

The decline curves here that I'm showing (indicating)

are from the wells' inception in 1988 through the current production month.

The other -- we're showing gas rate ranging from ten to 10,000 cubic feet per day versus time. As you can see, the wells have come on, in this case, somewhere in the 500 to 600 a day range, have declined out along this decline curve shown on these exhibits.

The next well pair that we have is Wells Number 40 and 41, again in the Douglas County Unit. These wells are approximately 1,140 feet apart. That's slightly underneath a 40-acre standard pattern.

Again the wells' decline curves are shown from their inception in 1988 through the end of the current production month. Wells came on line here a little bit stronger. We had production well over a 1,000 MCF a day.

The decline again after initial steep drop has leveled off. The little abberations that you see in each one of these decline curves are typically caused by increases in pressure in the gathering system that gathers these wells.

This is a very low pressure reservoir. We try to keep gathering system pressures to a minimum, and that is approximately 35 to 40 pounds to increase recovery from these wells. And as you can see at the tail end of each one of these decline curves, beginning approximately January, we've started to see a build-up in pressure in the gathering system and the corresponding

1-27

2/2

decrease in rate.

We've had some gas sales based on the less than cold winter we've experienced, our gas sales haven't been phenomenal, and because of that, pressures have come up somewhat in the gathering system.

Q. Let's go back to your first example. For the record, would you identify the location of Well 23 and 28.

A. Well Number 23 is located in the southeast quarter of Section 36. Well Number 28 would be located in the northeast quarter of Section Number 1.

Q. And the distance between those wells?

A. Is 979 feet.

Q. And have you seen any evidence of any well interference by virtue of this production over the past four years?

A. No. We have not seen any evidence of interference. Typically, if you were to see any interference, you would see somewhat of a change in the declined slope, and your well pair then would begin to mirror each other in the decline curve as their drainage areas are beginning to interfere.

To date we have not see anything that would indicate that we have interference within the four years of production that we have.

Q. And these wells are essentially on a 20-acre spacing as -- in relation to each other?

A. That's correct. They would be somewhat more than 20-acre spacing.

Q. Would you do the same thing for your second example, your Wells 41 and 40.

A. Wells Number 40 and 41 are located in the southeast quarter of Section Number 5. They are approximately 1,140 feet apart.

As I mentioned, that would be somewhat less than a typical 40-acre spacing pattern. Again, the same evidence presented in the decline curve to date, we don't feel that we have seen any type of interference whatsoever in these well pairs.

Q. On this exhibit, have you also identified the proposed wells that Conoco is going to try to drill in 1992?

A. Right. The proposed wells that are currently scheduled for the 1992 drilling program again are shown here in the open circles.

There's Number 50, 55, 49, et cetera. As you can see, these wells go back into some of the openings, if you will, that were left in the spacing patterns during the 1988 drilling program.

Q. Now, looking at that exhibit, it appears that there are wells that are located even closer to each other than the wells you've just testified about.

A. That's --

Q. Is there a reason for that?

A. From the new wells to the --

Q. Just from the -- no. The wells that have been drilled within the unit, looking at the map here of the wells as they're presently located.

A. I'm sorry. Could you repeat that.

Q. Yeah. From a non-technical standpoint, looking at the map it appears that there are wells located even closer than 900 feet to each other in this unit, specifically in Section 6.

A. Section 6, if you're referring to Wells Number 4 and Number 6, those are located in the northeast quarter of Section 4. These wells produce from different horizons.

Well Number 4 is completed in the Dakota Formation, a deeper formation. Well Number 6 is completed and producing from the Mancos "B" Formation.

Q. Let's get back to your proposed location. Why do you feel it's necessary to drill this well?

A. Based on the evidence that we have in the Douglas Creek Unit, particularly the lack of interference seen in these two wells, we feel that we're not adequately draining certain parts of the reservoir on the current spacing patterns that we have.

In order to adequately drain this reservoir within the economic life of the field, we feel that it's necessary, not only to drill the proposed location Number 56, but also to go in

and drill these other seven wells that have been proposed for drilling in 1992.

Approximately these wells, the other seven wells that are in the current drilling program, are more or less the same surface spacing as is Number 56. The location for Number 56 is, in general, equidistant from its surrounding wells and would place it about 1,500 feet from the next closest well, and that will be somewhat less than an 80-acre spacing well.

It would be somewhat more than a 40-acre well.

Q. If you are unable to drill this well, in your opinion will gas be left in the reservoir that wouldn't otherwise be recovered?

A. Yes. In my opinion, based on the tight nature of the formation and the characteristics that we've seen as evidenced here in the decline curves, I feel that within the -- in this case, life of this field, without this well, we would be leaving some gas in place.

Q. Now, with respect to correlative rights, to you have an opinion as to how the drilling cf this well might affect correlative rights of the owners?

A. Well, the correlative rights, certainly in the Dragon Trail Unit, will be impacted. We're drilling 60 feet from the lease line; however, again based on the nature of this formation, the tightness of it, and our evidence here as presented in these four delinquent curves, it would indicate that whatever damage

there might be has been minimized by the nature of the formation.

Q. Do you understand that if the Commission should see fit to grant this Application, they retain the continuing jurisdiction to take whatever action might be necessary in the future to protect the correlative rights of the parties?

A. Yes.

Q. And Conoco is willing to live with that?

A. That's correct. Conoco will live with that.

Q. And do you understand that the owners in the Dragon Trail Unit would have correlative rights to drill a compensating well on the other side of the unit boundary if they desire?

A. That's correct. That is my understanding, that if they so desire, Conoco would certainly not interfere in any way with DKM's rights, or for that matter, Celcius's rights to drill such a mirror well.

Q. Is there anything further that you feel that's pertinent that the Commission should know about with respect to this matter?

A. I can't think of anything at this time, no.

Q. Were Exhibits 2 through 14 prepared either by you or under your supervision and control?

A. Yes, they were.

MR. ODELL: I'd like to offer those exhibits into evidence at this time.

CHAIRPERSON: They are admitted.

(Applicant's Exhibits 2 through 14 were admitted into evidence.)

Q. (By Mr. Odell) You testified that you felt like the drilling of this well is necessary to recover gas that won't otherwise be recovered. Do you have any options as to why you place the surface location of this well, other than those described here today?

A. If we're to place a well on this site, because of the topography, this is basically the place that it will go, so we're very limited in the positioning of the well itself.

MR. ODELL: I have no further questions of the witness.

CHAIRPERSON: Mr. Sullivan?

CROSS EXAMINATION

BY MR. SULLIVAN:

Q. Yeah. Mr. Pellatz, if we could just go back to Exhibit Number 2, which is taken from Point A?

A. That's correct. It was taken showing Point A, and also Point 4 and 5-A.

Q. And that's right next to an abandoned house down there?

A. Yes. Point A is the abandoned house.

Q. How far is Point A from Conoco Well Numbers 29 and 5?

A. If you would let me get my scale, I can tell you.

Q. If you want to do it that way, or just a rough

estimate.

Q. It would appear to be somewhat less than a thousand feet, approximately perhaps 800 from a rough estimate, from the location, or from Point A to Conoco Well Number 29.

Q. Are there any dry holes located in the sections, either the section you're planning to drill on, or those adjacent sections, say, on that map?

A. On this map?

Q. Yeah.

A. No, there are no dry holes.

Q. Do you have any decline curves for any of the adjacent wells?

A. Other than the ones that are shown on Exhibit 14, no, I do not.

Q. And those are in different sections?

A. That is correct. I have those. They're not available at this point.

MR. SULLIVAN: That's all I have.

CHAIRPERSON: Questions from the Commission?

Mr. Odell?

MR. ODELL: I have one redirect, if I may?

CHAIRPERSON: Please.

(Continued)

REDIRECT EXAMINATION

BY MR. ODELL:

Q. With respect to these Mancos "B" wells, do you encounter relatively uniform performances and productivity, or do they vary in any extent?

A. As you can see in the decline curves here on Exhibit 14, they do tend to vary widely, based on the area that they're drilled in.

We really -- I mean, you can derive an average, a mathematical average, but the deviation from that is significant. We can have wells that range in the Douglas Creek Unit anywhere from 200 MCF a day on the initial rate, on up to -- as you can see, some of these wells here are well over a thousand.

Q. So you won't know what kind of a well you are going to get on the proposed well unless and until you drill it?

A. That's correct.

MR. ODELL: No further questions.

CHAIRPERSON: Is that it?

MR. ODELL: Yes, sir. That concludes our case.

CHAIRPERSON: Mr. Sullivan, are you ready?

MR. SULLIVAN: Yes, sir.

I'd like to have accepted as an expert witness Mr. Alan Nichol. If I could ask him to state his name and his qualifications and experience at this time.

CHAIRPERSON: Mr. Nichol.

MR. NICHOL: My name is Alan B. Nichol. I office at 1600 Broadway, Suite 950, here in Denver.

I've been in the oil business, primarily here in the Rockies for about 22 years. I have a Bachelor of Science degree in Geological Engineering from Michigan Tech, and a Master's degree in Geological Engineering from the University of Utah.

I've operated throughout the Rockies, starting here with Shell in 1969, and as a geological engineer and have had positions with several other companies here in Denver as exploration manager, vice president of exploration and operations, and executive vice president.

I'm currently -- the last six years have been a consultant for a number of clients, one of whom is DKM Resources, which is headquartered in Houston.

MR. SULLIVAN: Have you appeared previously before the Commission?

MR. NICHOL: Yes, I have.

MR. SULLIVAN: I would like to request that Mr. Nichol be admitted as an expert witness.

CHAIRPERSON: You don't have a resume in writing, by any chance?

MR. NICHOL: I'm sorry. I do not have a resume.

CHAIRPERSON: All right. His qualifications are accepted.

Mr. Sullivan, before we begin, I'd like to swear the

witness.

ALAN B. NICHOL

called as a witness on behalf of the Respondent, having been first duly sworn, testified as follows:

CHAIRPERSON: Would you please state your full name and address for the record, please.

THE WITNESS: It's Alan B. Nichol. I office at 1600 Broadway, Suite 1950, Denver, Colorado.

DIRECT EXAMINATION

BY MR. SULLIVAN:

Q. As one point of clarification as you go through the exhibits, Exhibits 2 and 3, they are both the same map. One has been reduced to fit on a photocopied 8-1/2 by 11 inch page.

Mr. Nichol, could you briefly describe the history of the Dragon Trail Unit and portions of Douglas Creek that are available in this area.

A. The initial development of the Dragon Trail Unit, which is the one in which DKM owns an interest, began in about 1962. Drilling continued through 1969 and on into 1970, and then there was some sporadic drilling in 1973, '75, and on into '79.

In 1981 some additional drilling was done to bring the field pretty much in the 160-acre spacing pattern, and that

continued on into 1984, and then in 1988, Conoco proposed an in-fill program, which is described, according to our records, to the partners at the time as being primarily an acceleration program, the lives of the wells being so long that it was necessary to drill additional wells to pick up the existing reserves in a reasonable amount of time.

In that proposal, Conoco recognized that they would get some new reserves, which you do with any program which, to my understanding, was not the primary thrust of that program.

The in-fill resulted in 72 additional wells drilled in 1988 through about 1990, and several of those you will see on the exhibit, whether they're ours or Conoco's, or offsets to the proposed location.

In other words, some of those wells are relatively new. You don't have a lot of history.

Q. I'd like to direct the Commission's attention to page two of Exhibit 1, paragraph number 2, and ask Mr. Nichol to explain who prepared the exhibit and what that paragraph means.

A. This is a portion of the presentation that Conoco made to the working interest owners' reading, where the in-fill drilling was proposed, and it just confirms what I just described as a presentation, primarily for the purpose of acceleration with minimal new reserves to be realized from the wells.

Q. Mr. Nichols, could you also please explain Exhibit

Number 2.

A. Exhibit Number 2 is a copy of a topographic map of the area which confirms the topography that Conoco has already shown, and contains the locations as red spots of the existing wells surrounding the proposed location for Well Number 56.

Okay. Basically, that area is already developed on what would amount to 80-acre spacing, allowing for the difficulties with terrain.

Q. Mr. Nichol, would you please now -- would you please explain why you think this particular area is already adequately developed and why the proposed well is unnecessary.

A. It's very difficult to find any sort of definitive evidence to point to, to say what a well is draining in terms of area of extent.

The formation is highly variable vertically and horizontally, as has been described and contains a vast number of very small stringers of gas burning sands within the shale beds.

We have virtually no bottom hole pressure data to use to define reservoir size and to use in predicting future well performance or even to determine what's happened so far in the way of drainage, what new well is drilled.

In searching for something that would provide a clue as to what's been happening here, I chose to make a comparison of performance of older wells versus newer wells, hoping that

that would give some clue as to whether or not the newer wells are finding any significant reserves or undrained reserves.

To do that, I used the production for December of 1991, and I chose a winter month because historically wells have been drawn down or pulled harder in the winter than they have in the summer, and that hasn't been a problem so much -- recently as it was in the past, but still a winter month is the best probably to use.

In that month of December of 1991, the 16 wells were drilled between 1981 and 1984, that means a producing time after hook-up of from about seven to a little over ten years, averaging 5 million cubic feet of gas per month per well, so those are the older wells.

For the same month, the 72 wells that were drilled as primarily in-fill wells, which have only been hooked up for a period of a little over a year or two, two and a half years, and which should evidence more energy and better initial producing rate capability, if they were, in fact, picking up more energy from new reserves, undrained areas -- averaged a little under 4.4 million cubic feet per well per month.

In other words, the newer wells were performing more poorly than the older wells, so there's no indication of any greater energy available to those new wells.

The logical conclusion is that there's no significant new reserves being found, and that the wells which we'll never

drill, when completed, are probably tapped to a partially depleted reservoir.

The next logical conclusion there is that if, in fact, the original 160-acre pattern was sufficient to draw down the reservoir pressure so that that lower pressure and loss of energy was realized or seen by the new wells, then what really is the need for any more wells to drain that reservoir?

Now, I can't say that there isn't that need, but we don't know yet. We've got a lot of new wells out there that may be in a significantly depleted reservoir, and there are some clues that show that -- no firm facts, but there is at least some clues to suggest that, and we are protesting the need for this particular well, which basically doesn't even go to 80's.

It's proposing to drill in a spot that would be equivalent after 40-acre drainage.

Now, on the exhibit that I passed out, there are two maps which are Exhibits 3 and 4. If, in fact, the area is being drained adequately on 160-acre patterns, that would be equivalent roughly to the schematic that is demonstrated in Exhibit 3, where each circle represents an area of 160 acres.

There's no way to say that each well drains 160, and that's kind of a misnomer anyway for a misapplication of facts, because what you're really saying is that a well that will drain 160 acres efficiently will drain a lot more than that inefficiently, and we recognize that there's a lot of variation

among wells out here.

But if, in fact, that were the case, then the only area not being drained right now by an average of 160-acre parcel would be less than two acres, and most of those two acres fall across the line into the Dragon Trail Unit.

Also if you look at the circle represented by the 160-acre area attributed to the proposed well for the purpose of this map, about 41 percent of that area falls across the line into the Dragon Trail Unit.

Now, Exhibit 4 is a similar schematic, showing the same sort of idealized circles as they have application, but just as a circle on what may be happening outside here for the accelerated production.

In other words, when an area is being accelerated right now by 80-acre patterns, and the area is not already covered by pre-existing 80-acre circles, the only area is 33 acres, and of those 33 acres, 15 are across the line.

The total portion of Well Number 56, then, on an 80-acre pattern, which falls across the line is 27 acres, some of which may already be accelerated by other wells.

Q. Mr. Nichols, just to reiterate what you're saying, is that this field was originally drilled on 160's, and they have just completed an in-fill program to drill it on what are essentially 80's?

A. Yes.

Q. How long has it been since the 80-acre wells were drilled?

A. Some of them have been on for about two and a half years since they were hooked up, and that range down with regard from then, to a little over a year perhaps.

Q. So when you -- you're only looking at about two and a half years of production for those in-fill wells?

A. Yes, that's right.

Q. Going to the Applicant's Exhibit Number 14, which shows decline curves as the last one in their book, do you feel that with two years of production, you can accurately tell what the ultimate production of that well will be?

A. Two years is about the minimum amount of time that you might be able to speculate to show what the production is going to be. Clearly, just looking at these curves, it's -- after three or four years, the curve of flow is still changing. I don't think two years is sufficient to make an accurate statement.

It's probably that point in time where you can begin to make the first reasonable estimate.

Q. Do you feel two years is enough time to determine whether there will be interference between these two wells?

A. No. In fact, if the wells are drilled at the same time and put on production at the same feeding into the same pipelines, and there's no interference testing done between the

wells, I don't know how you determine that there is or is not interference.

May I elaborate on that a little bit?

Q. Yes.

A. A typical tight gas reservoir has a very steep -- or a well in a typical tight gas reservoir has a very steep early decline, and on the typical semi-log float that was shown here on Conoco's Exhibit 4, it gradually flattens as the reservoir is drained farther away from the well bore, and the gas is basically having a tougher time getting to the well bore.

When you have a whole series, in this case of perhaps even hundreds of individual layers feeding into that well bore, as one layer flees, the next layer may find the opportunity to feed in where previously it wasn't because back pressure in the well bore was preventing it.

If you have, in a typical -- what we call linear flow situation, where you create an artificial fracture into a tight gas reservoir, and it actually taps two zones, the decline curve will flatten as the second zone starts to produce, and you get a surprisingly flat curve compared to what you would have had, had there been only one zone produced.

It may be, and it's just a speculation on my part, that what you have here is the same effect with numerous zones feeding in so that you have a decline that looks almost exponential, meaning on a semi-log plotted, it draws an almost

straight line.

If you're looking for interference between two wells that are doing that, I don't know how you determine it, unless you shut a group of wells in and see what happens to the other wells. But to be able to testify that there is or is not interference among wells, based upon those curves, I don't think I can do it. I think it's kind of in the eye of the beholder.

I don't feel that there's enough evidence here to say that there's no interference among the wells.

Q. Going back to Exhibit Number 2, Respondent's Exhibit Number 2, the topographic map, Mr. Nichol, can you point out the location of a structure that looks like it's about an eighth of a mile or a quarter of a mile from the southeast of the proposed well location?

A. Yes. On our Exhibit 2, there's a little black spot there denoting a building of some kind, which is about three eighths of an inch southeast of the proposed location.

Q. How far is that particular location from the Conoco well to the east and the red dot to the east, and the Conoco well to the south, which is marked "Gas Well"?

A. That relates to the question you asked earlier, and just without having scaled it, the answer will be approximately a thousand feet, maybe 1,100 feet from those two wells each.

Q. So that would be approximately the same distance as the wells that Mr. -- or that the Applicant was describing in

Exhibit 14?

A. Actually, yes. It might be a little bit more.

Q. And how far is that location from the unit?

A. Again, an estimate would be about five to six hundred feet.

Q. In your opinion, will a significant amount of gas not be recovered by the existing wells if the proposed well is not drilled?

A. No.

Q. Would DKM, if the proposed well were to be drilled, would DKM be willing to allocate production on a reasonable basis, if it were allowed to come into that well at pay-out for its proportionate share?

A. Yes.

Q. What's your opinion concerning the advisability of an option which would allow the Dragon Trail Unit owners to drill a compensating well 60 feet on the other side of the unit boundary?

A. I think that would result in significant waste. It wouldn't be necessary to drain the reserves. It would just be another well to drain existing reserves that have been established by previous wells. That would not be an economic option, in my mind.

MR. SULLIVAN: I'd like to move the admission of all of Respondent's Exhibits.

CHAIRPERSON: They are admitted.

(Respondent's Exhibits 1 through 4 were admitted into evidence.)

MR. SULLIVAN: That's all I have.

CHAIRPERSON: Mr. Odell?

CROSS EXAMINATION

BY MR. ODELL:

Q. Yes, sir. Mr. Nichol, with respect to your Exhibit Number 1, and particularly paragraph 2 on page 2 of that, this exhibit was written in 1988 prior to the drilling of a number of additional wells. Was it not?

A. That's correct.

Q. Is it possible that the information obtained in the drilling of these numerous additional wells might have changed the picture somewhat in both economics and a drainage standpoint?

A. We can be virtually certain that it has.

Q. With respect to your testimony relative to the 72 in-fill wells in the Dragon Trail Unit, in your comparison in December of '91, I believe, of producing rates, this was all limited to the Dragon Trail Unit, was it not?

A. Yes.

Q. And this was an overall pick throughout a unit that's how many thousands of acres?

A. Approximately 10,000.

Q. None of this -- these numbers in any way are related to the Douglas Creek Unit?

A. No, they do not.

Q. With respect to your testimony about the nature of this Mancos "B" Formation and the fact that you've got different contributing lenses, is that a correct term?

A. Yes.

Q. Are these different contributing lenses uniform throughout the field?

A. Certainly not.

Q. So the lens that might be present in one well or several lenses might not be present in the well bore of, say, a thousand feet away?

A. That's right.

Q. So because of this lenticulator at each well, you might be draining a combination of the same and many different lenses of Mancos "B"?

A. Yes.

Q. With respect to your testimony about unnecessary wells, economic time is also a consideration. As I understand it, theoretically, one well might drain a huge area over geologic time?

A. Yes. I've had some of those.

Q. So drainage over an economic time is certainly a consideration to an engineer planning a drilling program?

A. Yes.

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

MR. SULLIVAN: Two redirect, please.

CHAIRPERSON: Certainly.

REDIRECT EXAMINATION

BY MR. SULLIVAN:

Q. Is there any significant -- to your knowledge, is there any significant difference between the Mancos "B" reservoir and the Douglas Creek Unit and the Mancos "B" Unit in the Dragon Trail Unit?

A. As far as we can determine, there's no significant difference. The units are -- the units have convenience for other purposes and not because there's any change in geology.

Q. With regard to your use of averages in terms of either decline curves or pressures where there isn't any information on the proposed well since it hasn't been drilled yet and no information is given on the adjacent wells, do you feel that use of average data in those two units would be the best method to get an idea of how these wells would perform?

A. That's the best method I can come up with under the circumstances. I think the point to be made here is that we feel it's premature to be drilling additional wells where DKM, my client, would suffer drainage until a lot more is known about

the depth of those wells, what is actually happening in terms of drainage in the reservoir.

I think the clues are that there is drainage, and while the question about individual lenses and individuals wells not being existent in nearby wells is astute and perfectly valid, it appears that the majority of lenses are being drained by the existing well pattern if in fact, the performance data is a good indicator of that drainage.

MR. SULLIVAN: No further questions.

CHAIRPERSON: Questions from the Commission? Staff?

Okay. Final thing.

Do either of you want summary and conclusions before we begin our discussion?

Mr. Odell?

MR. ODELL: Sure.

CLOSING STATEMENT

BY MR. ODELL:

I think the evidence is uncontroverted that this is the only place to drill in that immediate area if there is going to be a well drilled.

The Applicant obviously feels that a well is necessary to be drilled in this particular position in order to recover additional gas.

We have -- we recognize that the Commission has

continuing jurisdiction if they should grant this Application, to take whatever steps are necessary to prevent the violation of the correlative rights of the Protestant.

The Commission has done that in numerous cases over the years, and Conoco is entirely willing to live under these rules.

The best evidence of the testimony has been that these wells vary from, let's say, 200 MCF to 1,000 MCF. We're not going to know what kind of well this is going to be unless and until it's drilled.

And we would certainly recommend that the Application be granted, that you let us drill a well. We'll be happy to come back in after a reasonable time and with the data we have, perhaps we can establish what is necessary to protect the correlative rights of the minority interest owner up in the Dragon Trail area.

CHAIRPERSON: Mr. Sullivan?

CLOSING STATEMENT

BY MR. SULLIVAN:

They start out with 160's in both of these units. Over the last two and a half years, they've dropped the in-fill to 80's. This area where the well is proposed has already been drilled on 80's.

It's only been two and a half years since it did that. Their best evidence doesn't indicate that 40's is going to

recover any additional reserves which -- in a sense, that's what they're going to be doing here. They're going to be drilling on 40's.

But what it does show is that they're drilling a well which is essentially on the unit boundary, taking any sort of control of operations away from DKM.

They'll have no say on the economics of the well, completion of procedures, anything like that, whereas, it looks like somewhere between -- depending upon whether you want to go with 80-acre drainage or 160-acre drainage, 30 to 40 percent of that production is supposed to be -- it will be allocated to the Dragon Trail Unit, the unit that DKM is in.

They haven't -- the Applicant hasn't established the Commission in 40's yet. They indicated that there are two situations in the Douglas Creek where they've drilled wells about a thousand feet apart. If they want to do that in this situation, they could drill it right where the abandoned house is located on our topographic map, on Respondent's Exhibit Number 2, which is looks like we put them well within the Douglas Creek Unit, and it probably wouldn't drain Dragon Trail; at least it wouldn't trail it as much as sticking it right on the line.

The Applicant also testified that production is better near the faults. Well, if you noticed on the Applicant's Exhibit 13, all of the faults are within the Dragon Trail Unit.

That, to me, indicates that what they're doing is snuggling up to the line in an attempt to get possibly the better production, the lion's share of which should probably go to the Dragon Trail Unit.

Our testimony has been that even on 80's, there's not going to be a significant amount of additional gas recovered. It's an acceleration program, possibly driven by Section 29 Sands Gas Credit since that's a factor here, but no significant amounts will ultimately be recovered.

The Douglas Creek Unit wants to increase, accelerate their production. That's fine. They can do that if they want to. I don't think until you've established that there really is 40-acre drainage out here that they should be allowed to drill a well in this existing location, where it will impact the rights of other people who don't feel that 40 acres is economically a smart idea right now.

CHAIRPERSON: Thank you. Any comments, observations, questions?

MR. BUYS: Why don't you want to drill it on your Point A on your map, your photographs? It's obvious -- I mean, it appears that it would be an easier location to build.

MR. PELLATZ: I think it gets back to the issue that the core of the debate here is what we feel is the best way to economically drain this and feel that there's gas left that will be left unless we have the well at the location that we proposed.

Certainly you can put a well down here near that house, but you would perhaps recover some of that.

The feeling is still that you would still leave some gas that would not be recovered. That's the basic reason is, as we went through on the earlier exhibits for the sighting of all these wells, was to go basically into the open spots and put a well equidistant from the surrounding wells, which is what we've done here.

In this case, unfortunately, it happened to come a little closer to the Dragon Trail lease line than what the current rules provide.

MR. BUYS: For the non-geologists, non-production engineers, non-lawyer person, myself, tell me what would be your proposal so you could drill your well, so you can get your drainage on the unit that you operate -- and I guess I'll know before you testify -- and still protect their rights, and that if there is drainage into the other unit, that they can get compensated for it?

MR. ODELL: We would propose -- let's drill the well, give us a reasonable amount of time to test it, and then we come back to this Commission, and in the first instance, we sit down with the protestor and see if we can possibly agree on what some formula might be.

If that's not possible, then we will come back before this body and present the evidence that we have, fully expecting

you to put some kind of a limitation on production, either from a volumetric basis as has been done recently, where you determined what percentage of the reserves belong to the Applicant and what percent belongs to the Protestant, and you let the Applicant produce his percentage of reserves.

The alternative to that, as the Commission has done, is some formula of a percentage of the average daily production of the offset wells.

CHAIRPERSON: You think a reasonable amount of time after drilling a well is a year? Two years?

MR. PELLATZ: As Mr. Nichol indicated, that tends to be somewhat biased by the well itself.

It would appear from the decline curves that I've looked at that some time after the two-year interval, you should have a very good idea, hopefully, of what the well is doing, and in some wells, it does take longer than that.

Some wells we feel that we have a very comfortable, as he indicated, first pass, if you will, but the first pass may not vary very much from the absolute reserves that are finally determined.

Certainly within the two years, you will have -- you have a reasonable point where you can adequately predict reserves.

CHAIRPERSON: Questions?

Logan?

MR. MacMILLAN: Are you interested in participating in the well at all?

MR. NICHOLS: No, sir.

MR. MacMILLAN: Not at all?

MR. NICHOLS: No.

MR. SULLIVAN: The position that DKM has taken is that they obviously don't feel that the well is necessary. They can wait a year or two longer to have those drained by the existing wells.

If the wells were to be drilled at this location, which DKM thinks is a lesser alternative, it's not the advisable one; they don't feel that they should be put at any risk on the well if they were to come in at pay-out for their proportionate share.

That, in their view, would be, assuming the well is drilled, that would be the equitable way to do it, right at pay-out, their proportionate share.

The problem with that is that you've got a problem with determining what the reserves are, and at some point, you'd have to determine that, and maybe the solution there would be to have an independent engineer, a third party agreeable to those two, allocate the reserves between the units after you've got some production from the well.

MR. MacMILLAN: Well, if you're not willing to drill the well, I'm not sure that we're allowing -- if we carry that

scenario further, why should you come in right at pay-out as opposed to a penalty, because you weren't willing to share in the capital risk to have the well drilled? Essentially a non-consent.

MR. SULLIVAN: These are essentially no-risk wells.

MR. MacMILLAN: Well, the reserves are the risk. I think, yeah, everybody would feel confident that they could drill a well, case it, perforate it, and get some gas back. The question really is the reserves -- right? -- the economics of the well, how well the well performs, and if another operator is willing to take that risk to drill the well, if one is to assign you, as a non-participant in that capital risking, an opportunity to come back at their recovery of the cost to me, that's contrary to what the rules of the Oil and Gas Commission have set up previously to allow for proper compensation for that risk.

MR. SULLIVAN: Well, those rules are set up for wells drilled at a legal location. In this situation, they're not at a legal location.

We won't have any control over the operations of that well. They're really -- you balance out the capital cost risk, as you call it, with the fact that there is substantial evidence to indicate that those reserves will already be drained by the existing wells.

This is just going to increase whatever is there, whether it's large or small. This new well will just increase

the rate at which those reserves are produced.

MR. MacMILLAN: Right. And I understand this and accept that. Let's move on to another concern that I have, and then come back to this one.

I hope that they're all related. If not, then I'm not thinking right.

An easier location, it appears to me from the topographic map, is actually in Dragon Trail Unit itself, not out on the topographic point, but slightly to the west where you see the broadening of the contours and Conoco; you may want to look at your Exhibit Number 2 with your more detailed topographic surveys in there, but there's a considerably larger area there that would accommodate a pad essentially going in any direction, and it would, from my perspective, be limited as it serves the interests of filling in the undrained portion that you believe is still there. Isn't that correct?

Am I correct in trying to piece together what it is that you all are after?

MR. PELLATZ: Right. That would be, perhaps, in viewing the site, a slightly better location. I guess I -- we have spoken, of course, with DKM. We've been advised that due to a number of reasons, they do not feel able at this point to participate in any capital expenditures in the properties that we operate, and they're the minority interest holders in those properties in the Dragon Trail.

If we move it across the lease line, we'd still be looking at drilling the well basically at 100 percent Conoco. They would opt to -- or as they've advised, would tell us to opt to take their non-consent option. With that, and with also the rest of the wells, we intend to operate these areas as independent.

There's a separate gathering system which Conoco also operates that serves other wells. With all of the rest of the activity that we proposed for 1992, it was simpler at that point to say that we would try to place the well in the Douglas Creek Unit as far away from the property boundary as we could to keep everything within the same unit, whether we talk about going in for any of the gathering system, et cetera.

It was just a matter of simplicity, knowing that DKM already advised us that they weren't willing to participate in any well in Dragon Trail.

MR. MacMILLAN: And at that time when you had those discussions with DKM, I presume that this location close to the abandoned house down off the cliff was discussed?

MR. PELLATZ: No. We have not discussed that location at all before today.

MR. MacMILLAN: And you heard their location, and your response is pretty much the same? It's a little bit too close to the other two wells that exist in that portion of the section to suit your fancy?

MR. PELLATZ: I guess what I would say is basically

when we went in to look at this location, trying to find places or looking at the Douglas Creek Unit to see if we were adequately draining, in our opinion, the reservoir, we noticed these areas that we didn't feel we had sufficient wells to drain in economic times.

56 is one of those wells. The location of it was picked by basically going the distance from the offsetting wells, both in Douglas Creek and in Dragon Trail, and then trying to move, using that as the first screening criteria, trying to move as far away as we can from the lease line, and so the proposed location at the house would not be equidistant, as you can see from the offset wells, and therefore, we feel that it wouldn't do as good of a job of adequately draining this portion of the reservoir in economic times.

MR. MacMILLAN: Yeah. But as they pointed out, it's not that much further away from the existing wells. As to other wells that have been provided on your exhibit, we will have a variety of exhibits. 13 and 14 is the one where you actually showed the distance between the wells.

That's the one which you showed 979 feet between the Number 28 and the Number 23, and the distance between Wells 40 and 41 is 1,140 feet.

MR. PELLATZ: That's correct. And from the rough scaling that we've both done, it would appear that that location would be somewhat in the same general vicinity as far as

distance-wise.

MR. MacMILLAN: And it's your understanding also that it would meet the requirements, the set-back requirements from the unit boundary, without having measured it, but eyeballing it?

MR. PELLATZ: It would appear. I haven't looked at it. No. Since we haven't seen that or talked about that location, haven't measured it, it would appear that you could get far enough from the unit boundary, yes.

MR. MacMILLAN: Okay. To the rest of the Commissioners, I'm perplexed by this. I'm sorry that you all weren't able to come to some kind of agreement between yourselves.

You know, if you believe in 80-acre spacing, another well could be put in there somewhere. The set-back from the unit boundaries, I think, is a fair thing too, or exception to be given, which Conoco is offering to do at a later time.

One's reserve can be determined, but it doesn't sound to me like these formations are all that amenable to quickly resolving that, and without the provision of the companies working together in the risk of capital and so on, I guess we're allowed to make the decision for them, which we don't have a vested interest in it, as was pointed out to us by Mr. Welborn, who says when you guys come to us and ask us for the decisions, we lay them out for you and boy, you may get stung.

Probably not nearly as good as what you can work out together, if you'll decide to sit down and do that. And I don't

know which direction to go.

CHAIRPERSON: What's your proposal?

MR. MacMILLAN: Well, we haven't seen any data from the surrounding wells or what their decline curves are like, nor have we seen what the production performance is from that. Neither side has presented that.

If we were to come back after a well is drilled and try and determine that, I'll bet you dime to a dollar we'd see that information from all of the wells, and then there would be a wrestling match as to which ones were representative of that.

I hate to slow down Conoco's program for the year, but at the same time, we're going to see it later on, one way or another.

MR. CAMPBELL: On the other hand, if it's a 40-acre drainage, then the well is legal because there's a big hole.

MR. MacMILLAN: Yeah, yeah, so I don't have a specific proposal, other than more data can be provided, but it just slows down the whole procedure for those people that want to participate.

For those that don't, they haven't lost anything, and there's another 30 days worth of production, hopefully.

MR. BUYS: When were you proposing drilling this well?

MR. PELLATZ: Pardon me?

MR. BUYS: This is a 1992 well.

MR. PELLATZ: Yes.

MR. BUYS: Is it at the head of your drilling list or the bottom of the list?

MR. PELLATZ: It will be at the bottom, but these wells are very shallow.

MR. BUYS: How deep?

MR. PELLATZ: The deepest would be under 2,500 feet. They take approximately the bulk of the time to move the rig on and off location. Total time for drilling is about three days.

MR. BUYS: Have you started drilling '92 wells yet in this unit?

MR. PELLATZ: No, we've not. We're in the process of constructing locations, but have not started any drilling.

MR. BUYS: Do you have an approved APD from the BLM on this?

MR. PELLATZ: We have not submitted the APD, pending the Commission's findings.

MR. BUYS: Do you have an official on-site or an informal on-site with the BLM?

MR. PELLATZ: I'm not quite sure what you mean by official versus unofficial, but we had the BLM representative -- again, those are subject to final findings in the APD process.

MR. BUYS: Did you have archeological clearance done?

MR. PELLATZ: Yes.

CHAIRPERSON: Well, for what it's worth, I think this is one of those cases where it would have been helpful if this

had been more successful in the conversations in the hallway before than this obviously was.

I think the evidence clearly indicates that the well, if it's going to be drilled, is going to have to be drilled at some location other than the one required in the existing rules.

The topography out there is such that some changes are obviously necessary. For me, it's a significant fact that there's contest here or dispute here between the parties as to whether or not this is a necessary well, but the people who are willing to put up the money think it's a necessary well, and I think that's a significant, and probably for me, decisive factor.

The Commission has, in the past, and probably will in the future, grant exceptions with the understanding that the results of the well will have an effect on the future behavior and the results might well require that the parties reappear before the Commission to take further action, but for me, first, if a well is to be drilled, clearly the topography required that it be moved; secondly, if it's in doubt as to whether or not the well is necessary, the people who are willing to spend the money say it's necessary, and for those reasons, I'd be inclined to grant the exception.

MR. CAMPBELL: I so move.

MR. BUYS: Yeah, I second it.

CHAIRPERSON: Further discussion?

That was easy. All right. The motion to approve the

application for an exception location is made and seconded. All those in favor, indicate by saying aye. Those opposed, same sign.

The motion carries.

(The proceedings were concluded.)

REPORTER'S CERTIFICATE

The above and foregoing is a true and complete transcription of the requested portion of my stenotype notes taken in my capacity as Official Reporter, Colorado Oil and Gas Conservation Commission, Denver, Colorado, at the times and place above set forth.

Dated at Boulder, Colorado, September 27, 1992.

Robyn Dane

ROBYN DANE, C.S.R.