BEFORE THE OIL AND GAS CONSERVATION COMMISSION

OF THE STATE OF COLORADO

****

IN THE MATTER OF THE PROMULGATION)
AND ESTABLISHMENT OF FIELD RULES)
TO GOVERN OPERATIONS IN THE) CAUSE NO. 393
CHALICE FIELD, ARAPAHOE COUNTY,)
COLORADO.)

PURSUANT TO NOTICE to all parties in interest, the above-entitled matter came duly on for hearing at Room 110, State Centennial Building, 1313 Sherman Street, Denver, Colorado, at the hour of 10:40 o'clock a.m., December 20, 1982.

BEFORE:

Commissioner Howard Schmidt, Chairman
Commissioner Gerald Sjaastad
Commissioner Harry Peacock

APPEARANCES:

Frank J. Piro, Secretary, Denver;

Corliss Thalley, Attorney at Law, Denver, appearing in behalf of Oil and Gas Commission.

William Odell, Attorney at Law, Denver, appearing in behalf of Intercontinental Energy.

David Knowlton, Attorney at Law, Denver, appearing in behalf of Samuel Gary Oil Producer and Mesa Petroleum.

Russell W. Emerson, appearing in behalf of Ute Energy.

Arthur S. Brewster, appearing in behalf of Mesa Petroleum.

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CHAIRMAN SCHMIDT: The next matter is Cause No. 393, Chalice Field. The applicant is Intercontinental Energy Corporation. Subject: 160-acre spacing unit for production of gas from "J" Sand.

I believe that we have an objection from Samuel Gary Oil Producer on permitted well location. You have a letter on file, Mr. Piro?

MR. PIRO: Yes, I do.

CHAIRMAN SCHMIDT: Is the applicant present and ready to proceed?

MR. ODELL: Yes, sir, we are.

MR. BREWSTER: Mr. Chairman, I would like to make a statement at this time, if I may, sir.

CHAIRMAN SCHMIDT: Just a minute. Is there anyone else appearing here either in conjunction with or opposed to this?

MR. KNOWLTON: Yes, Mr. Chairman. I'm David Knowlton appearing for Samuel Gary Oil Producer and Mesa Petroleum.

CHAIRMAN SCHMIDT: Anyone else?

MR. EMERSON: Russell W. Emerson from Ute Energy Company.

CHAIRMAN SCHMIDT: Your name is?

MR. BREWSTER: My name is Arthur S. Brewster. I'm with Mesa Petroleum Company, division land manager.

CHAIRMAN SCHMIDT: You desire to make a statement before this starts?

MR. BREWSTER: If I may, sir.

CHAIRMAN SCHMIDT: Go ahead.

MR. BREWSTER: Mesa is the leasehold owner of several leases within the area covered by the application of Intercontinental Oil and we'd simply like to state that Mesa Petroleum concurs in all respects with the position to be taken by Samuel Gary Oil Producer with regard to the application of Intercontinental Oil.

CHAIRMAN SCHMIDT: Thank you.

Are you ready to proceed, Mr. Odell?

MR. ODELL: Yes, sir, we are. Maybe we can clear the air quickly here. Mr. Knowlton and I have been in communication and the applicant has absolutely no objection to their proposal with respect to the location. I believe they are going to put on evidence, but there is no controversy with respect to what is going to be proposed by the protestant.

CHAIRMAN SCHMIDT: All right, sir. Then if you are ready to proceed, you may proceed.

MR. ODELL: I have two witnesses I would like to have sworn at this time, Mr. Dean Rogers and Mr. Frank Kowalczyk.

(Witnesses duly sworn.)

CHAIRMAN SCHMIDT: At this time I believe,

before we do proceed, I don't see the letter of protest.

MR. PIRO: It's only on file.

CHAIRMAN SCHMIDT: Will you read that into the record at this time so we know what the protest concerns?

MR. PIRO: "Comes now Samuel Gary Oil Producer, owner of oil and gas leasehold interest in the NW 1/4, Section 14 of 4 South, 64 West, and protests the application of Intercontinental Energy for an order establishing 160-acre drilling and spacing units for production of gas from the "J" sand formation, covering among other lands, the NW 1/4 of Section 14, 4 South, 64 West, Chalice Field, Arapahoe County, Colorado, the permitted well location to be in the southeast of each quarter section with a 200-foot tolerance in either direction.

"Samuel Gary Oil Producer believes that protection of correlative rights, prevention of waste, and the assurance of orderly development of the common source of supply would be better served with the permitted well location in the approximate center of each quarter section, not less than 600 feet from the exterior boundary of each quarter section and not less than 2400 feet from any other producible or drilling oil or gas well in said "J" sand formation."

CHAIRMAN SCHMIDT: Then we are ready to proceed.

MR. ODELL: We have some exhibits here to pass out.

CHAIRMAN SCHMIDT: We are ready to proceed.

MR. ODELL: This is the application of Intercontinental Energy Corporation seeking to establish 160-acre drilling and spacing units for the production of gas and associated hydrocarbons from the "J" sand formation underlying certain lands in Arapahoe County, Colorado.

I would like to call as our first witness Mr. Frank Kowalczyk.

FRANK KOWALCZYK,

having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. ODELL:

Q Please state your name, by whom employed, and in what capacity.

A My name is Frank Kowalczyk. I'll spell it for the reporter. K-o-w-a-l-c-z-y-k. I'm the exploration manager for Intercontinental Energy Corporation.

Q What is your profession, Mr. Kowalczyk?

A I'm a geologist by training, but I'm working as an exploration manager currently.

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

A No, I haven't.

Q Would you summarize for the Commission your educational background and your work experience in the field?

A I received a bachelor's degree in geology from the University of Akron in Ohio. That's in '72. Master's degree in geology from Miami of Ohio. In '74 went to work with Gulf Oil in the Gulf Coast area in Houston from 1974 to '78, then got transferred to Casper office with Gulf, worked there for two years in the Casper office in the Rocky Mountain region. Came to Denver in 1980, worked with Lad & Lewkowitz, a small independent, and for the past year currently employed as exploration manager for Intercontinental Energy.

Q Have you performed geologic studies in the area which is the subject of this application today?

A Yes, I have.

Q Are you the member of any professional societies?

A I'm a member of the Rocky Mountain Association of Geologists, active member; an active member of the AAPG; active member of the Wyoming Geological Association.

MR. ODELL: I would like to move Mr. Kowalczyk's acceptance as an expert witness.

CHAIRMAN SCHMIDT: His qualifications as an expert witness, as a geologist, are admitted.

Q (By Mr. Odell) Mr. Kowalczyk, have you

prepared certain exhibits to present to the Commission?

A Yes. We have four exhibits named Exhibits A through D. Exhibit A is the land situation in the area to be considered for spacing today.

I'd like to state at this time that I would like to have a correction or addition to this exhibit. In Section 14, the NW 1/4, Samuel Gary owns 50 percent of that lease. When we made this map up, we took the major lease-holders off of the Pomco map and Mesa had it on the Pomco.

Q I would just ask you to go ahead and tell the Commission what is shown on your exhibits and, by the way, if the Commission pleases, as to Exhibit D, which the two maps are the cross-sections on the wall, we have extra copies here which you're welcome to. They're rather bulky. I'll make several available if you wish to utilize them.

Please proceed, Mr. Kowalczyk.

A On Exhibit A, shows the acreage positions of the companies that own acreage in the area to be spaced. The area to be spaced is shown as a dark dashed line.

The companies in the area are Mesa Petroleum, Macey Mershon Oil, Champlin Petroleum, Intercontinental Energy, Ute Energy, some USGS land, and Samuel Gary.

As shown on Exhibit A in color, Intercontinental Energy acreage, you can see that IEC owns approximately about 60 percent of the acreage to be spaced

in the area.

Exhibit B shows a structure map on top of the "D" sand at a contour interval of 20 feet. All it shows is the nosing through the area to be spaced. This is drawn on top of the "D" sand because in this area, the top of the "D" and structure on top of the "J" sand are essentially the same. The acreage is also shown on Exhibit B in stipled pattern.

Exhibit C is a net sand isopach of a J-1 and J-2 sand combined and as shown on Exhibit C, the area where we think the sand is located is in the area to be considered for spacing, the maximum area of sand in the area.

Exhibit D is two cross-sections showing the "J" sands of the J-1 and J-2 across the area showing that sands do pinch out -- not the sands but the porosity pinches out both to the north and to the southeast.

Chronologically what happened in this area, in 1981, June, IEC drilled the No. 1 Cavanaugh, No. 1X, in Section 21 in the NE 1/4. It had about 14 feet of porosity greater than ten percent and because of hole conditions, when they were drilling their well, they drilled the "D" and set casing and went in there and tested through casing. It I.P.'d for around 450 to 475 MCF plus some condensate.

The next well was then drilled to the east in Section 22, the Cavanaugh 2 in the NW 1/4 and this well was drilled to the "J" sand and I.P.'d for around 250 MCF and some

condensate.

The third well was drilled in March of '82 in Section 15 in the SW 1/4 and it I.P.'d for about 750 MCF and about 47 barrels of condensate.

All wells shown in the area to be spaced are shut in at this time. Then Ute came in in Section 10, offset the Dawson No. 1 Cavanaugh well, which is in the SW 1/4 and offset it in the SE 1/4 of Section 10 and got a well in the "J" sand for 205 MCF and about five barrels of condensate.

IEC then drilled in October the No. 1 RR&S in Section 28 in the NW 1/4. This well at this time is being completed.

Ute then drilled a well in Section 11 this month and it also is being tested at this time. They have six feet of sand that had greater than ten percent porosity in that well. It hit our map almost perfectly on the net sand isopach. We didn't have to change that map at all.

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The two dry holes that you see in the area to be spaced in Section 10, the Dawson No. 1 Cavanaugh in the SW 1/4, at this time, in my opinion, it would be a passed up producer. It was drilled in the sixties and there were no tests reported run in the well, but looking at the logs right now, you would have to go back in and at least test that sand.

The wells in Section 29 in the NW 1/4 were drilled. They had real good shows. They had about 14 feet

of greater than ten percent porosity, but there is a questionable completion technique on those wells and our engineer can explain that a little bit better when he gets up.

Showing off the Exhibit D --

Q Excuse me, Mr. Kowalczyk, before you leave Exhibit B, with respect to your well in Section 28, you indicate it's been drilled and is being completed but I don't believe you testified as to whether or not it would be productive of gas from the "J" sand.

A At this time it looks like it will be productive from the "J" sand. At what I.P. we do not know at this time, but it looks like it's going to be productive.

Off of Exhibit D, the cross-section A-A', which goes from Section 10, 4 South, 64 West, from northeast tothe southwest, goes through the heart of the sand body. In the Chandler & Associates well, Rosenfeld No. 4-29, we had about 14 feet of sand that had greater than ten percent porosity. This is one of the wells that had a questionable production technique to get it on production. They plugged and abandoned the well after a couple of attempts at trying to produce this well.

We then go to the discovery well, which is the IEC Cavanaugh 1X. It had about 14 feet of sand that had greater than ten percent porosity and I.P.'d for almost 550 MCF and 43 barrels of condensate.

The next well in Section 15 was the Cavanaugh 3. It had both sands in it and had about 12 feet of sand greater than ten percent porosity.

As we go up to the Ute well in Section 10, the lower sand has disappeared and the upper sand at about 14 feet of porosity greater than ten percent.

The second cross-section, B-B', goes from a direction of northwest to the southeast and the first well is in Section 8, was the Amoco Production well, the Amoco West Cavanaugh No. 1. As you see, there's hardly any sand buildup in this well at all. Besides no porosity, sand is pinching out to the north. You pick up the sand in the Ute No. 1 Dan Kissler well again, in Section 10, 4 South, 64 West, and come across down across the Cavanaugh 3 in Section 15 and the Cavanaugh 2 in Section 22. In Cavanaugh 2, the sand has started to pinch out and in the well in Section 23, I don't know the name of the well in Section 23 of the SW 1/4, there's no sand at all in that.

The well that is producing in Section 26 has nothing to do with the area that's being spaced at this time. In my opinion, we're looking at a different sand in that area of the "J" sands and has nothing to do with what we're looking at in the area to be spaced.

Q Mr. Kowalczyk, how many wells within the area at this time are indicated to be productive of gas from this

"J" sand reservoir?

A Well, the four Intercontinental wells and the two Ute wells look like they should be productive and the Chandler & Associates and/or the Lowry Continental Lowry 11-29 in Section 29 could be a producer, in my opinion.

Q Now, with this many wells already indicated to be productive in the area, do you have any opinion as to the nature of this reservoir? That is, is it a bar or channel or --

A From the wells that we looked at in this area to be spaced, it is my opinion that we do have a well enough control from these wells that we have a bar type situation in these sands that is just sitting exactly where the area to be spaced is.

Q Mr. Kowalczyk, in order to establish spacing, this Commission has to be convinced that the area that you're seeking to space is underlain by the productive reservoir. Now, do you have an opinion as to whether or not it is and if so, upon what do you base that opinion?

A I believe, in my opinion, that the acreage to be spaced is bounded and is controlled by this sand, both because of the well control in the area and because of the cross-sections in Exhibit D, show that the sands do pinch out to the southeast and to the northwest and that there is a porosity barrier in both directions too.

Q In your opinion, would this bar deposit be somewhat uniform, consistent?

A Yes. It would be consistent as shown on Exhibit C, the net sand isopach, greater than ten percent porosity shows that with the well control, all we have is a nice sand body sitting in there.

Q Were Exhibits A through D prepared by you or under your supervision?

A Yes, sir, they were.

MR. ODELL: We would like to offer those exhibits into evidence.

CHAIRMAN SCHMIDT: Exhibits A through D are admitted in evidence.

Q (By Mr. Odell) Mr. Kowalczyk, do you have anything further that you believe might be helpful to this Commission in making its determination?

A No, not at this time.

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

CHAIRMAN SCHMIDT: Mr. Knowlton, do you desire to examine?

MR. KNOWLTON: No, I do not, Mr. Chairman.

CHAIRMAN SCHMIDT: Mr. Emerson, do you desire to ask any questions?

MR. EMERSON: No, I do not.

CHAIRMAN SCHMIDT: Mr. Brewster, as I understand it, you're being guided by --

MR. KNOWLTON: He has departed, Mr. Chairman, so I'll represent him.

CHAIRMAN SCHMIDT: Are there any questions from the Commission, Staff?

(No response)

Hearing none, the witness is excused.

MR. ODELL: Our next witness, I'd like to call Mr. Dean Rogers.

DEAN ROGERS,

having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. ODELL:

Q Please state your name, by whom employed, and in what capacity.

A My name is Dean A. Rogers. I'm employed by Intercontinental Energy as manager of engineering.

Q Are you a professional engineer?

A I have not passed the professional engineering test.

Q Are you a practicing petroleum engineer?

A Yes, I am.

Q Have you previously testified before this

Commission?

A No, I have not.

Q Would you briefly summarize your educational background and work experience in the field?

A I received a bachelor's of civil engineering from the University of Wyoming in 1975. I went to work for Continental Oil Company in the Gulf Coast area for three years as a reservoir and production engineer. The last five years have been spent with independents here, operating here in the D-J Basin and on the Western Slope of Colorado, the first being Crystal Oil Company, the second Koseka Resources, and currently with Intercontinental Energy.

Q Are you a member of any professional engineering organizations?

A Yes. I'm a member of SPE, Society of Petroleum Engineers, of AIME.

Q Have you done engineering studies in the area around the Chalice Field which is the subject of the application?

A Yes, sir, I have.

MR. ODELL: We would move his qualifications, Mr. Chairman, as an expert.

CHAIRMAN SCHMIDT: His qualifications as an expert are admitted.

Q (By Mr. Odell) Mr. Rogers, have you prepared

an exhibit to submit to the Commission today?

A Yes. I have prepared Exhibit E.

Q Let me direct your attention to that exhibit and I'll ask you to explain what is shown on the exhibit.

A Exhibit E is an economic analysis of a typical well in the Chalice Field. I've chosen the Cavanaugh 1X located in Section 21, the NE 1/4, 4 South, 64 West.

The Cavanaugh 1X is slightly better than the Cavanaugh 2 and slightly poorer than the Cavanaugh 3. The three wells there in 21, 22, and then north into 15. As you know, the current spacing is 40 acres in that area. I have prepared two scenarios, one on 160 acres, the other, if two wells were drilled on 80 acres.

The cost, proceeding through this exhibit, the cost would be 450,000 for one well drilled on 160 acres, 900,000 for two wells drilled on 80 acres. Operating cost, $500 a month per well; therefore, it would be a thousand dollars a month for the two wells.

I've used a gas price of $4 per MCF. I arrived at this through 102 pricing and BTU adjustment. The current BTU is about 1250 to 1280 BTU's.

The condensate price, and this definitely is condensate, with A.P.I. gravities ranging up to 70. I've used a price of $33 a barrel in both cases. Working interests is 100 percent in both cases. Revenue interests,

83.33 in both cases.

I've escalated prices and operating costs at eight percent per year in both cases and I've used a maximum selling price, gas price, of $10 per MCF and a maximum condensate price of $50 per barrel.

Cumulative gas production was arrived at through our four point test in the area, bottomhole pressures, using porosities of 10 to 14 percent and permeabilities of less than one tenth of a millidarcy. These were obtained from a core taken from the Cavanaugh No. 3 well located in Section 15. I arrived at a cumulative gas production of half a billion cubic feet for one well on 160 acres, 560 million cubic feet for two wells, drilling two wells on 80 acres. That gave me a present value before taxes, discounted at ten percent, of 1,390,000 for the one well on 160 acres and $1,325,000 for the two wells drilled on 80 acres. You can see that the additional 60 MCF in no way pays out a second well.

I also feel that based on today's frac' technology, we have no problem at all designing a frac' that would adequately drain the 160 acres versus two smaller frac's on the 80 acres.

The nature of these wells is that after perforating, after casing has been run and perforating, there's very little gas at all, maybe a show of condensate.

After acidizing to clean up any drilling damage, there's still marginal, at best, production capabilities, 10 to 20 MCF, so a frac' does have to be done and one frac' to drain 160 acres is substantially less in expense than two 80-acre tracts. Therefore, you come up with an undiscounted return of 4.09 for one well, 2.40 for two wells.

Q In your opinion, would a prudent operator drill more than one well on each 160-acre tract?

A No.

Q Could you justify it from an economic standpoint in any way?

A No. I don't feel that you can justify it. You can see that's risk of 900,000 to obtain a million three twenty-five is substantially greater risk than the $450,000 investment to come up with $1,390,000.

Q In order to establish this spacing, it has to be shown that one well will adequately and efficiently drain a 160-acre size tract. Would you go into a little more detail with respect to your statement that with frac'g designs, you can efficiently drain 160 acres? What type of frac' are you referring to?

A We're using cross length gel systems ranging from 50,000 pounds up to 100,000 pounds and using the frac' company's technology, we feel that we can get lengths up to 1300 or 1400 feet which would adequately drain 160 acres.

Q Based upon that, then, would the drilling of more than one well on 160 acres constitute the drilling of unnecessary wells?

A Yes.

Q With respect to the proposed location, in your application, you requested that the Commission establish the southeast 40 acres of each 160-acre tract as the permitted location. Have you been in contact with other parties who have acreage in the area and specifically the protestant in this case?

A Yes. We have been in contact with Samuel Gary, Champlin, and Mesa Petroleum through you.

Q I believe you were here today when Gary Operating Company's position was read into the record with respect to what they proposed as the permitted location.

A Yes.

Q Do you have any objection if the Commission should see fit to grant that as the proposed location?

A No, I do not.

Q In any event, would you recommend that the existing wells already permitted and/or drilled within the area be the permitted well for the 160-acre tracts on which they're located?

A Yes.

Q Was Exhibit E prepared by you?

A Yes, it was.

MR. ODELL: We would like to offer that into evidence.

CHAIRMAN SCHMIDT: Exhibit E is admitted in evidence.

MR. ODELL: One further question.

Q (By Mr. Odell) Is 160-acre drilling and spacing units smaller than the maximum area that can be efficiently and economically drained by one well?

A No. It is not smaller than the area that can be drained by one well.

MR. ODELL: We have no further questions.

CHAIRMAN SCHMIDT: At this time, Mr. Knowlton, do you desire to question?

MR. KNOWLTON: No questions of the witness, Mr. Chairman.

CHAIRMAN SCHMIDT: Mr. Emerson?

MR. EMERSON: No, sir.

CHAIRMAN SCHMIDT: Any questions from the Commission?

COMMISSIONER SJAASTAD: I have some.

EXAMINATION

BY COMMISSIONER SJAASTAD:

Q Did you compute a payout in years for each case, case 1 and case 2? I'm referring to the columns in

your Exhibit E.

A No, I did not.

Q Did you compute a useful life, expected useful life of the well in each case?

A Yes, I did.

Q What was that?

A The 160-acre spacing, one year, one well, was 15 years life and the two wells had a seven-year life.

Q I assume the answer to this question is no. The frac'g you talked about, is that included in your capital costs in each case?

A Yes, it is.

Q You said frac'g one well was going to be overall cheaper than frac'g two, so I don't understand why one is exactly twice the other.

A One frac'd would be less expensive than doing two just by moving the equipment out there and the horsepower charges and all this, but I didn't feel that it was significant enough. You have extra equipment for the second well and this sort of thing. They balance out.

Q Then is that frac'g taken into account when you compute 500 MMCF from 160 acres or will that go up?

A No. This is after frac'.

Q Then will you repeat if you remember Gary's position on location? Maybe Mr. Knowlton ought to do that.

MR. KNOWLTON: At this time, we're going to introduce some testimony of our own.

COMMISSIONER SJAASTAD: On that point?

MR. KNOWLTON: Yes.

CHAIRMAN SCHMIDT: Any other questions of this witness?

(No response)

Hearing none, the witness is excused.

MR. ODELL: We have nothing further, Mr. Chairman.

CHAIRMAN SCHMIDT: Mr. Knowlton, you may present your evidence.

MR. KNOWLTON: I have one witness, if he could be sworn at this time, please.

(Witness duly sworn.)

CHAIRMAN SCHMIDT: You may proceed, Mr. Knowlton.

MR. KNOWLTON: Thank you, Mr. Chairman. My name is David Knowlton. I'm appearing on behalf of Samuel Gary Oil Producer and also on behalf of Mesa Petroleum.

As indicated, we are not opposing, as a matter of fact we concur in the basic spacing at 160. We have evidence which we'd like to introduce on the permitted well locations. We think this is rather significant. It does vary somewhat from that proposed by the applicant, which

their proposal is in the center of the SE1/4 of each quarter section and our suggestion to the Commission is that you allow the approximate center of each quarter section not less than 600 feet from the exterior boundary of each quarter section and not less than 2400 from any other producible or drill oil well, oil or gas well, in the "J" sand formation.

We have one witness.

JOHN MOREL,

having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KNOWLTON:

Q Please state your name and address and current occupation.

A My name is John Morel. My address is 2792 South Fillmore in Denver and I'm currently working for Samuel Gary Oil Producer as exploration manager.

Q Have you testified before this Commission?

A Yes, I have.

Q On how many occasions?

A Twice before this Commission.

Q Briefly, and I would ask that it be brief, could you state your qualifications and what area you did testify?

A I testified as a geologist. I have a Ph.D. in geology from the University of Wyoming, six years

experience with Amoco here in Denver, one and a half years with Davis Oil Company in Denver, and one and a half years at Samuel Gary Oil Producer.

Q Are you acquainted with this particular area which has been defined as the Chalice Field?

A Yes, I am.

MR. KNOWLTON: I would ask at this time that Mr. Morel's qualifications as a petroleum geologist be accepted.

CHAIRMAN SCHMIDT: His qualifications as an expert are accepted.

Q (By Mr. Knowlton) Mr. Morel, you've heard the previous testimony of Mr. Kowalczyk and Mr. Rogers, have you not?

A Yes, I have.

Q Basically do you agree with their proposals, that it be spaced at 160?

A Yes, I do.

Q Do you agree with them that this does constitute a common source of supply as to the area which is requested in their spacing application?

A Yes. From all the work I've done, it's a common source of supply.

Q As I understand it, on behalf of Samuel Gary Oil Producer and as well Mesa Petroleum, you are suggesting

that permitted well locations be slightly different than what has been suggested by the applicant? Would you advise the Commission of why you are suggesting this and what you think would be accomplished?

A Yes. First of all, I'd like to introduce the exhibits that I have on the wall. There are two maps, first of all a net sand isopach, contourable five feet, which is very similar to the contour map introduced by Intercontinental Energy. This delineates the common source of supply and I feel there are no substantial differences between this map and the one that we have presented earlier.

I also have a structure map on the top of the "D" sand which shows that there are no closed features in this spaced area and that the production is controlled by the porosity rather than by structure.

The outline of the area to be spaced is shown in blue on both of the maps.

In general, I agree with the outline of the area to be spaced. I agree with the 160-acre spacing, but I do not agree that the legal location should be designated as the SE 1/4 of each quarter section.

Going back to the isopach map, along the east side, the southeast side, and the south side of the proposed spaced area, the zero isopach contour cuts through all of the quarter sections that form that boundary. If the legal

locations were to be in the SE 1/4 of each of these quarter sections, they would be outside the zero contour and therefore out of the reservoir as we currently have it delineated.

The proposed rule would not protect the correlative rights of these properties.

Secondly, a review of the existing wells which are shown in pink on the wall exhibits, there are five wells capable of production in this area and two of the five would be exceptions to the spacing proposed by Intercontinental Energy. They would be in the SW of the SE 1/4 of Section 10, and the SW of the SW of Section 11, in Township 4 South, 64 West.

Thirdly, the lack of drilling that would occur along the east, southeast, and south edges of this field would potentially waste the reserves under these properties. Therefore, our proposal is for a legal location in the center of each quarter section and not less than 600 feet from the quarter section lines and not less than 2400 feet from any producing or drilling wells.

The plats shown on the exhibit has the section lines drawn as heavy dark lines. The quarter sections are indicated by light lines and the legal spacing setbacks for 600 feet are indicated on a sample spacing plat drawn in the southeast corner of the exhibit and the dashed lines represent the legal spacing within each quarter section as we

propose it.

This allows for the orderly development of the field because the wells can be placed within each quarter section to more effectively drain that property. All five of the existing wells conform to our proposed rules. It maintains separate areas of drainage by requiring 2400 feet between wells and our proposal allows for sufficient choice of drill site to encourage drilling along the east, southeast, and south sides of the field while maintaining 160-acre spacing.

So we feel that our proposal will protect correlative rights, prevent waste, and assure orderly development of the field.

Q Mr. Morel, were these exhibits prepared by you or under your supervision?

A Yes, they were.

MR. KNOWLTON: Mr. Chairman, we would ask that these exhibits be admitted into evidence.

CHAIRMAN SCHMIDT: Is that all one exhibit or is it four exhibits?

MR. KNOWLTON: Let's say it's one exhibit. I think you could accept it that way.

CHAIRMAN SCHMIDT: We'll accept your exhibit. It's admitted in evidence.

MR. KNOWLTON: We would ask at this time that

the permitted well locations for the proposed spacing be as requested in our particular protest and I believe the expression by Mr. Odell that they don't object to it.

We further would ask that a representative here of Ute Energy make a statement as to their position at this time regarding our proposal.

CHAIRMAN SCHMIDT: Do you wish to make a statement?

MR. EMERSON: Ute would like to go on record as favoring the proposal set forth by Samuel Gary Oil Producer.

MR. KNOWLTON: I have no further questions of this witness, Mr. Chairman.

CHAIRMAN SCHMIDT: Mr. Odell, do you agree to the proposal?

MR. ODELL: Yes, sir.

CHAIRMAN SCHMIDT: Any questions of this witness by the Commission or Staff?

(No response)

Hearing none, your witness is excused and what is the pleasure of the Commission?

COMMISSIONER PEACOCK: Mr. Chairman, I move that we approve this application as amended and the locations be the center of the quarter sections and within 600 feet of the lease boundaries and 2400 feet of existing oil and gas wells, and exclude the present wells. Is that basically --

that would exclude the present wells in the unit. You may or may not be right on the locations.

MR. KNOWLTON: They're on pattern on there would be no variance or exceptions required. Thank you.

COMMISSIONER SJAASTAD: Second that motion.

(Motion voted upon and carried unanimously.)

C E R T I F I C A T E

I, Darlene Armbeck, Certified Shorthand Reporter, hereby certify that I personally recorded in shorthand the proceedings in Cause No. 393 of December 20, 1982, and that the same was later transcribed under my supervision, and that the foregoing record is true and correct to the best of my knowledge and belief.

Certified Shorthand Reporter

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