CASE 4899: Application of SKELLY FOR POOL CREATION AND SPECIAL POOL RULES, EDDY COUNTY, N.M.

Lase Number

Application
Transcripts.

Small Exhibits

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BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico February 5, 1975

EXAMINER HEARING

IN THE MATTER OF:

Case 4899 being reopened pursuant to the provisions of Order No. R-4477, which order established temporary special pool rules for the Cedar Canyon-Morrow Gas Pool, including a provision for 640-acre spacing units.

CASE NO. 4899

BEFORE: Richard L. Stamets, Examiner

For the New Mexico Oil Conservation Commission:

Thomas Derryberry, Esq.

Legal Counsel for the

Commission

State Land Office Building
Santa Fe, New Mexico

For the Applicant:

L. Charles White, Esq. 220 Otero
Santa Fe, New Mexico
(No Appearance)
and
Chester E. Blodgett
Tulsa, Oklahoma

EXHIBITS

Applicant's Exhibits Nos. 1, 2 and 3

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MR. STAMETS: Case 4899.

MR. DERRYBERRY: Case 4899. In the matter of Case 4899 being reopened pursuant to the provisions of Order No. R-4477, which order established temporary special pool rules for the Cedar Canyon-Morrow Gas Pool, including a provision for 640-acre spacing units.

MR. STAMETS: We call for appearances in this case.

MR. BLODGETT: I am Chester Blodgett appearing for

Skelly and I believe I see that Mr. White has entered his

entered his appearance as local counsel for us. We have

MR. STAMETS: If he will stand and be sworn, please?

(Witness sworn.)

DALE NICHOLS

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

DIRECT EXAMINATION

BY MR. BLODGETT:

one witness.

Q Will you state your name, your occupation, and by whom you are employed?

A I am Dale Nichols, Reservoir Engineer for Skelly
Oil Company, Midland, Texas.

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Q Mr. Nichols, have you testified before this Commission previously and have your qualifications been accepted?

A I have, and they have.

MR. STAMETS: The witness is recognized as qualified.

BY MR. BLODGETT:

Q Mr. Nichols, I call your attention to the exhibit that has been marked as Exhibit No. 1 in this case. Would you identify that, please, and explain what it shows?

A Exhibit No. 1 is a land plat of the Skelly-operated Cedar Canyon Unit.

(Whereupon, a discussion was held off the record.)

A This plat shows the two wells that have been drilled. The unit outline and the hatchered area shows the acreage which has, since the unit was formed, expired and is no longer committed to the unit.

Q Is Skelly Oil Company the operator of all of the acreage?

A Skelly is the operator of all acreage except the hatchered acreage at the present time.

Q I call your attention to what has been designated

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NICHOLS-DIRECT

Page 5

as Skelly's Exhibit No. 2. Would you identify that, please, and explain what it shows?

A Exhibit No. 2 is a history of the drilling, development and production of the Skelly Unit of the Cedar Canyon-Morrow Gas Pool in Eddy County. It gives the completion, first production and cumulative and estimated ultimate of the two wells which have been completed.

Q I call your attention to what has been designated as Skelly's Exhibit No. 3. Would you identify that and explain what it shows, please?

A Exhibit No. 3 is a tabulation of the economic parameters which were calculated after Federal Income Tax using Skelly's in-company tax figures, based on development cost of 1.4 million dollars and using recoveries of three cases, of three possible cases which could be encountered in the Cedar Canyon-Morrow Gas Pool.

Q Briefly, what do those figures show?

A The three cases in which we have economics determined were a 2.2 billion ultimate recovery as is now anticipated from Cedar Canyon 10 Well No. 1 which is located in Section 10. We have economics which were run on 4.56 billion cubic feet which are the volumetric calculations of the anticipated recovery from the Cedar Canyon 10 No. 1

NICHOLS-DIRECT

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using 640-acre drainage. We have Case 3, which is 6.317 billion cubic feet, which is the volumetric calculations of Cedar Canyon Well No. 1 in Section 9 using 640-acres. You will notice that we have volumetric reserves here and what we estimate as ultimate. In the original drilling of these wells, we signed volumetric reserves to them. Now, this was a straight-forward calculation of the anticipated recovery between the initial reservoir pressure and an abandonment pressure estimated at 2000 pounds.

After completing the Cedar Canyon No. 1 and requesting and obtaining temporary field rules for 640-acre spacing, we drilled the -- I beg your pardon -- the first was the Cedar Canyon No. 1 in which we got 640-acre spacing and temporary field rules. We drilled the Cedar Canyon 10 No. 1. Prior to completing Well 10 No. 1, we already had pressure information indicating the Cedar Canyon No. 1 would not recover the volumetric reserves which we had assigned which is 6.3 billion cubic feet.

In the completion of the Cedar Canyon 10 No. 1, we did some early tests, pressure test data which we used the initial pressure and we also had a pressure bottom in the hole when we ran a 4. test, and we also ran another pressure build-up approximately 60 days after the well went

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on string. Extrapolating these pressures to an ultimate recovery indicated that Cedar Canyon 10 No. 1 would produce slightly less than 2 billion feet of gas. Our volumetric calculations indicated 4.5 billion cubic feet of gas.

It was with this realization that we ceased our development in this pool, and shortly after the completion of Well 10, No. 1, the acreage to the east of Section 11, 14 and part of the acreage in 23 expired due to non-development of the lease. Since this was a working interest unit and not a royalty interest unit, these leases were not helped by the drilling of two wells.

we are at this time requesting that these temporary rules be made permanent and the 640-acre spacing be maintained for the reason that we have undeveloped acreage, and we have a geological study now in progress which indicates that we may encounter better reservoir conditions to the south and east of the present developed well. We have a tentative recommendation at the District level to drill a well in Section 15. If the temporary rules are suspended and state-wide rules are adopted for this pool, it would be uneconomical for us to drill in Section 15, and with the accelerated drilling cost, it will be marginal even on 640-acre spacing under the reservoir interpretations,

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reservoir conditions that we expect to encounter here.

Q In your opinion, Mr. Nichols, would the making permanent the temporary field rules that contain also a provision for 640-acres tend to prevent waste, promote exploration and protect correlative rights?

A Yes, it would definitely tend to promote development in this area.

Q Were Exhibits 1, 2 and 3 prepared by you or under your direction?

A They were.

MR. BLODGETT: We tender Exhibits 1, 2 and 3 into evidence.

MR. STAMETS: Exhibits 1, 2 and 3 will be admitted.

(Whereupon, Applicants' Exhibits Nos. 1, 2 and

3 were marked for identification and were

admitted into evidence.)

MR. BLODGETT: That concludes our direct examination of this witness.

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Nichols, what is the nature of the Morrow formation here? Is it a blanket sand?

A Contrary to the South Carlsbad, this is not a

Page......9.....

blanket sand. We are on a sand bar, and to elaborate on what the geologists tell us on this, our Cedar Canyon No. 1 located in Section 9 is producing on the edge of a sand bar roll extending from the northeast to the southwest. This same sand bar is present in the Cedar Canyon 10 No. 1, however, the correlative interval of these two wells are not completed in the same correlative interval. They are both in the Morrow. The Cedar Canyon 10 No. 1 is completed from a higher stratographic section but a lower structural section. The sand drops off in the roll, sand bar roll, and the development to the northeast in the last year tends to prove the sand bar extends more to the south and the east, and this is a very local situation here. It is considerably different from South Carlsbad where it is more of a blanket sand in this clastic deposit.

Q Mr. Nichols, I believe that various Commission orders and even orders of the Supreme Court seem to indicate that the South Carlsbad is made up of a number of isolated sand stringers which may or may not be interconnected between the wells. Is this substantially different from that situation?

A The only difference is that this is not as broad, it is not as blanketed as each of the individual lenses in

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the South Carlsbad. The South Carlsbad lenses generally carry across one or two or three sections in one or two locations. In this case, we have two wells which are not completed in the same lens, and they are offset locations, and the blanket to the southeast is unknown. We hope that it is more of a blanket sand to the southeast where we can pick up additional pay.

- Q In the Morrow formation, is this not typical to find two offsetting wells that are not completed in the same interval and then maybe find a third well somewhere else?
- understand it, extending into the basin from the South Carlsbad field are on more narrow, pronounced sand bars as you extend into the basin through the Cedar Canyon area and all the way over into Antelope Ridge. The sands in the South Carlsbad have a greater aerial extent than they do in any of these other sand bars that extend to the southeast. That is the information I have been told.
- Q This is a unit operation, Skelly is the unit operator. Under unit operations, would you be required to drill wells on 320 acres if those were the effective pool rules if such development would not appear to be economical?

W.

A I can't answer that, but I don't think -- it would just be my opinion -- I doubt very seriously we would be forced to develop anything that uneconomical, but I cannot answer the question. I do not know.

Q What would you say the reserve calculations on the No. 1 Well were based on, the initial?

A The initial reserve calculations were based on 10 feet of pay, 13 percent porosity and water saturation, 28 percent, calculated from the original bottomhole pressure and abandonment bottomhole pressure of 2000 pounds.

- Q Were they calculated for 640-acre tracts?
- A 640-acre tracts.
- Q And that was what figure?
- A 6.3 billion.
- Q I believe your Exhibit No. 2 shows --
- A (Interrupting) Less than a half billion will be recovered.
- Q Does this seem to indicate that the reservoir extends over considerably less than 640 acres?
 - A About 45 acres.
- Q It does not appear that that well will drain 640 acres?
 - A The well will drain the reservoir, and by the

by that same analogy. We made an initial assignment of 4.5 billion feet. It will recover 2.2 billion feet, some 309 acres under our volumetric calculations, however, the pressure information indicates that this is depleting the reservoir, and it is doing it in less than two years. So, if the reservoir was considerably larger, it would deplete it. I think this is pretty substantial evidence that it would deplete a considerably larger area. This is dry gas. There is no condensate produced. There is some water being produced, but we are depleting —— Cedar Canyon 10 No. 1 has already accumulated 1.7 billion. It is less than two years old, and it will get only about 2.2 billion, so it is nearing depletion.

- Since these wells are not completed in the same sand stringer, zone, bar, whatever, there can be no evidence of interference or connection between the two wells?
- A I think there is evidence that there is no communication between them. We have pressure data on No. 1 which showed severe depletion before No. 2 was ever put on the string -- or the 10 No. 1 which it is designated
- Q (Interrupting) Would 320-acre spacing give you more flexiblity in locating wells within this unit than

Page 12-A

640-acre spacing?

- A I don't believe so. I am not sure.
- Q Let's take an example. Let's say that you drill a well in the northwest quarter of Section 15 and should find a Morrow Channel Sand trending toward the southeast quarter of Section 15.
 - A Right.
- Q With 640-acre spacing, where would your next well have to be?
 - A It would be the northeast of 15 or the --
 - Q (Interrupting) With 640-acre spacing --
 - A (Interrupting) It would be a mile away.
 - Q It would be clear outside the section?
 - A Right.
- Q Is it a little more risky to step out that far on a Morrow well than, say, just into the next half section?
- A Yes, it would be originally, but I think what we have to realize here is to get favorable economics on 320-acres, we would have to develop something like 30 feet of net pay with around 16 percent porosity. We haven't encountered this in either of the wells so far. We have encountered 19 feet in the second well we drilled at about 9 percent porosity, and 10 feet in the first well with about

Page. 12-B

14 percent porosity.

Q But in no case have you found a sand which appears to cover even as much as 320 acres?

A No, we have not. Our future recommendations here will be on geological recommendations more so than any reservoir data that we have. We don't want to hit either one of the reservoirs these wells are in.

Q Let's say, for instance, I believe you testified it would be uneconomical to drill the well in Section 15 on 320 acres?

A Right.

Q If you drill that well and discover this 30-foot sand that you are talking about and it has a lot of gas in it and has good communication, that would be an economical venture, wouldn't it, regardless of the amount of acreage that is dedicated?

A Thirty feet -- this was porosity -- would be economical on 320 acres.

- Q If you find a good sand, you've got an economical venture, and if you find a poor sand, you've got an uneconomical venture?
 - A That's right.
 - Q Regardless of the amount of acreage that is

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dedicated to it?

That's right.

MR. STAMETS: Are there any other questions of the witness?

REDIRECT EXAMINATION

BY MR. BLODGETT:

Isn't it true, Mr. Nichols, that you have to show certain projections that look like the well will be economical on the face of the presentation at least, and together with the geological information that you have, and would the well be projected in the area that you just mentioned, Section 15, if the acreage is set at 320 acres rather than 640?

I don't think I could justify making a recommendation on 320 acres in Section 15.

MR. BLODGETT: If I may make a short statement, I think as a practical matter of these companies, you have to show them where there is a possibility of the well not paying out before they are going to invest the money. You asked one question as to whether or not it was on 320 and we could drill on it if we have to, or something like that. Now, I don't think, just as a general rule, if you don't drill on it, you lose the lease eventually unless

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it is being held by production from somewhere else. That is one reason some of these cases have been expired now, some of these leases have expired under their own terms in the hatchered area. I think really what it boils down to is this is a marginal proposition either way, and by leaving the 640-acre spacing in there, it might encourage a little development there. Apparently, in our opinion, if the spacing is reverted back to the state-wide of 320-acre spacing, there wouldn't be that additional exploration, and then it might be just one more well. I realize this is not the strongest case in the world, but by the same token, I don't see anything that would be lost, and it might help to promote some additional production in some ways and might recover some gas that might otherwise be wasted.

RECROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Nichols, I would like to ask a couple more questions in light of what Mr. Blodgett last asked you. You indicated that you would have to change your recommendations to management if these wells were drilled on 320. Now, if the wells were drilled on 320, would that change the geological recommendation any at all?

A In our recommendations we get from the geologists, their interpretation of net effective pay we will encounter, and the amount of porosity. That is the information that they pass on to us for us to make our recommendations.

Q This would not change regardless of whether it was 320 or 640?

A Right. They have said that they feel like we could expect 150 percent increase in sand body at the center of Section 15 if we drill there. They have made the recommendation. I have not made the recommendation. The geological department has made the recommendation that we drill and they are staffed to us on the development. This is really the production department. They were engineering recommendations, but they did make a recommendation to us.

Q What specific factor, then, harms the economics of this geological prospect when you go from one spacing to another?

- A The amount of net pay that is anticipated.
- Q That doesn't change with the surface acreage, does it?
- A No, it changes the amount of gas you can anticipate. If you have 30 feet of net pay, all other things being equal, it is twice as much reserve there as 15 feet

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of net pay.

Q We are talking about a geological situation over there, and that you will find with the hole drilled in the ground?

A Right.

Q And the surface acres, whether they are 320 or 640, you will still find that formation, isn't that right?

A Oh, yes.

Q And the surface acres won't change the amount of gas that can be recovered from that well, will it?

A The acreage dedicated to the well will not change the gas recovered from the well unless another well is drilled in there to produce part of it.

Q Right. I don't believe that you are able to tell us whether under unit operations you would be required to drill a second well there?

A I would say that I don't think we would be.

MR. STAMETS: Are there any other questions of
this witness?

He may be excused.

(Witness dismissed.)

MR. STAMETS: Is there anything further in this

case?

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MR. BLODGETT: We have no further evidence.

MR. STAMETS: We will take the case under advise-

ment.

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STATE OF NEW MEXICO)
COUNTY OF SANTA FE)

I, RICHARD L. NYE, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

COURT REPORTER

do nereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 46 heard by me on 1975.

Lev Mexico Otl Conservation Commission

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MR. STAMETS: Call next case 4899. MR. CARR: Case 4899, Application for Skelly Oil Company for pool creation and special pool rules, Eddy County, New Mexico. MR. STAMETS: Call for appearances in this case. MR. BLCDGET: Chester Blodget, Tulsa, Oklahoma, 7 Attorney for Skelly. I also have an entry of appearance for ŝ L. C. White of Santa Fe in this particular case. 9 MR. STAMETS: Are there other appearances in this 10 case? MR. BLODGET: Yes. We have two witnesses, Mr. 11 Elton Rodgers and Dale Nichols. 12 MR. STAMETS: If they will both stand and be sworn, 13 please. ELTON RODGERS DALE NICHOLS 16 Elton Rodgers and Dale Nichols were called as witnesses and 17 after being duly sworn, according to law, testified as 18 follows: MR. STAMETS: You may proceed, Mr. Blodget. DIRECT EXAMINATION 21 BY MR. BLODGET: State your name, please. Elton Rodgers.

Have you ever testified before this Commission before?

		21 aroung are Aon embroked.
	3	A I am employed by Skelly Oil Company.
	. 4	Q What is your position with them?
6	5	A I'm District Project Geologist for the West Texas land
	6	and Eastern New Mexico area.
•	7	Q Would you give us a short run-down of your educational
	8	background?
;	9	A I graduated in Texas Technical College in 1950, May of
	10	1950, with a bachelor of science degree in Petroleum
	11	Geology; and I was employed by Skelly in August of
	12	1950 and have been in their employ since that time.
87108	13	MR. STAMETS: You have been employed as a
X X Y Y	14	geologist in varying capacities and in the West Texas - New
GOE. NEW MEXICO 87108	15	Mexico areas since that time?
100 x 31	16	THE WITNESS: Yes. I was employed the first year
j 2	17	as a surface geologist in Texas and Kansas. Then I moved to
	18	Amarillo for three years. I was in Abilene for seven years,
	19	and I have been in Midland for 12 years.
	20	MR. STAMETS: You are familiar with the content of
	21	that application?
	22	THE WITNESS: Yes.
	23	MR. STAMETS: The witness is qualified

I believe you stated you are familiar with the

application of Skelly Oil Company in Case No. 4899

No, I have not.

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PAGE 5 call your attention to Exhibit 1 which is posted on the board up there, and was that Exhibit prepared by you or under your direction? It was prepared by our drafting section in our Midland office. Under your supervision? Yes. What does that depict? This is a geographical area of the well in question which we are requesting 640 acre spacing. It is on the southeastern corner of section 9. It is a, more a discovery well; and we have drilled a second well in Section 10. It's also shown on this map. This is in the Range and Township designated on the corners of this. MR. STAMETS: It shows the drilling on Exhibit 1? THE WITNESS: This well is at total depth, and we are attempting to perforate and complete at this time. Call your attention to Exhibit 2. Tell us what that is, please. This is a reduced copy of our electric log on this well, and it serves to show the vertical position of the Morrow section at this location in Section 9. MR. STAMETS: Do we have another set of these

Exhibits for Mr. Carr?

The Morrow section on this log has been outlined in red

to show the top and bottom position here. We bottomed

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the well, the original well in the slur devonian attempting to find Silurian production. On the way down, we did test the Wolfcamp and Pennsylvanian zones. There is a drill stem test noted on this log as drill stem test Number 7 which was a dry test. Subsequent to the testing, we ran a set of electric logs which picked out the zones that you see in red in the depth These are the perforations that exist in the They are in a coarse angular sand conglomerate and generally has a coarse cement, very little lime in We have established our primary production in the zone below 13,300 or between 13,300 and 13,400. other perforations above that zone are opened there and limited in their production, but their primary zone is in the lower par. The second well that we are drilling in Ten is an objective to this zone. It is T. D.'d at approximately 13,000 feet. This Exhibit really just served to show in the vertical section where we are completing it, the reservoir. Applicants Exhibit No. 3, would you identify that for us, please?

This is a regional map approximately one inch in six

On this map, I have had our drafting group

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color all of the Morrow production yellow. In the central part is our Cedar Canyon well. It's just about seven miles, eight on the W., Malaga. All of these fields are not necessarily from a common zone within the Morrow, but they are Morrow completions. Our drafting group worked with our exploration geologist covering this portion of the Delaware Basin of New Mexico, and these were the wells that he considered to be Morrow completions and the extent of the rules as he determined it at that time.

- Q This Skelly's Morrow Well, was that a wildcat well when they drilled it in that area?
- It was a wildcat well. There were, I don't believe there were any Morrow penetrations in the Township at the time. There were some in the immediate northeast area and to the west, but there was no Morrow production in the Township or in general within a couple of Townships, I guess.
- Q And your copy of Applicants Exhibit No. 4, would you state what that is, please?
 - This is a tabular listing of the fields shown on the Exhibit No. 3, with the field, naming the pool that they are completed in, the lithology, and in general the spacing. Most of the spacing in this area has been on the New Mexico statewide spacing rule of 320 acres for

Pennsylvanian and older formations. There are some prorated at 640 acres such as the Cat Claw Draw north of Carlsbad and the Grama Ridge which is over near the Central Basin platform in Lea County; and we have shown on this Exhibit that our Cedar Canyon is a 640 acre request. The rock tank field which is, if my mind doesn't deceive me, is a one-well field southwest of Carlsbad which is also, it has also been placed on 640 acres.

MR. BLODGET: Any further questions of this witness?

MR. STAMETS: Does that conclude your direct
testimony?

MR. BLODGET: Yes.

MR. STAMETS: Does anyone else have any questions of Mr. Rodgers?

CROSS EXAMINATION

BY MR. STAMETS

- Mr. Rodgers, Skelly is proposing here that the entire

 Morrow zone would be the vertical limits of the

 proposed Cedar Canyon Morrow pool?
- Not necessarily the whole Morrow. We do think that it would in general be well to do this, but we have not requested this entire interval. We are requesting an interval of our perforations. In other words, we are showing the vertical limits 13062 to 13374 as the

dearnley, meier & mc cormick

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	pool limits.
Ω	Mr. Rodgers, the application here says that the new,
ers.	let's see, a new gas pool to the Morrow formation
~	should be recreated and designated the Cedar Morrow
	Gas Pools. The way I read that, that's the entire
	Morrow formation. I'm not quarreling with this. I'm
	trying to elicit a little information here.
A	Right. All right. We would not quarrel with putting th
	entire Morrow in there, but the interval that was
	stated in this application was from the zones shown on
	this electric log from the top to bottom of those
	zones.
— ∂ :-	Now, looking at your log, you have basically three
	different intervals here in the Morrow?
A	Yes.
Ω	Would it be practical to dually complete or triply
	complete these three intervals?
A	We did not believe, or at least from performance, I
	would not think that they would be feasible to do this.
Ω	In what respect?
A	The upper two sets of perforations have produced at
	rates of approximately 250,000 cubic feet of gas with
	100 pounds of flowing tubing pressure. The lower one
	is the zone of a potential calculated open flow of 32

million with 44,000 pounds or better of flowing tubing

1	pressure.
2	Q What about the pressures in these zones? Are they
3	substantially different or are they close enough that
4	they won't have any problem?
5	A I do not have that specific information.
6	MR. BLODGET: He's not an engineering witness.
7	MR. STAMETS: Okay. I'll refer those questions.
8	I believe that that's all the questions I have. Are there
9	any other questions of this witness? He may be excused.
10	DALE NICHOLS
11	was called as a witness and having been already duly sworn,
12	testified as follows:
13	DIRECT EXAMINATION
14	BY MR. BLODGET.
15	Q Please state your name.
16	A Dale Nichols.
17	Q And by whom are you employed and as what and for how
18	long?
19	A I'm employed with Skelly Oil Company as a reservoir
20	engineer for five years.
21	Q Have you testified before this Commission previously?
22	And I have.
23	MR. STAMETS: As a reservoir engineer?
23	THE WITNESS: As a petroleum consultant.
24 25	MR. STAMETS: Your testimony was toward reservoir
40	t the company of the

engineering? 2 THE WITNESS: That's right. 3 MR. STAMETS: Okay. You are familiar with the 4 application here? 5 THE WITNESS: 6 MR. STAMETS: Okay. The witness is qualified. ĮŢ, Mr. Nichols, I show you a copy of Exhibit No. 5. Could 8 you tell us what that is and what it shows, please? 9 Exhibit 5 is a data sheet prepared on this discovery well, Cedar Canyon No. 1, gives all the pertinent data on the well along with our volumetric reservoir calculation. I call your attention to Exhibit No. 6. What does that show? Exhibit 6 is a schematic of the physical well bore conditions as they existed when the well was completed from the Morrow. It shows the total depth, the various strings of pipe, the cementing required, and the presences open to production. Now, I call your attention to Applicants Exhibit No. 7. Q Would you tell us what that is and comment on it please? Exhibit 7 consists of two pages depicting the 22 economics which we calculate for Morrow production. 23

Page one is an economical tabulation of drilling and

producing one well per 640 acres. The production is

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set out by years. The price of the gas, income, production taxes, operating expenses, capital expenditures, cash flow, and the discounted cash flow are all presented. The reserve used in this consists of the volumetric reserves as shown in Exhibit 5. We have 6,316,000 MCF of gas, and these are from the volumetric calculations as shown on Exhibit 5. We have scheduled this production at a rate of one million cubic feet per day for every five million reservoir reserves, and that is how we set out our yearly production.

MR. STAMETS: A one to five ratio?

THE WITNESS: One to five ratio. We normally use a one to eight, but with these low reserves, we went to one to five and projected the production to depletion of 6.3 billion reserves. Again rated a cash flow for a 640 acre location for the same conditions with two wells on 640 acres which is page 2 of Exhibit 7.

I'm drilling two wells and the drilling expenses are entered as one item as a capital expenditure, \$575,000 per well. This is a development well cost not the cost, of the number one well. The number one well was considerably higher than that. This is the development cost for a single Morrow completion, \$575,000; and then page 2, we have depicted drilling two wells.

Since we are using the same reserves our production
schedule stays the same for the one well or the two
wells. In neither case does the discount of cash flow
look really attractive in this, but certainly the two
wells for 640 acres would cost, would have a loss of
\$402,000 over the life of the two wells on a discounted
cash flow. This is discounted at ten percent. One well
per 640 acres would show a discount in cash flow of
\$210,000.

In your opinion and from your studies of this area and of this well, is it your opinion that one well would adequately drain 640 acres?

It is my opinion that it will. We have only the one completion in the pool at this time. We are completing a new well now, and we believe that one well will drain 640 acres. I'm certain we would like to see developed along that line.

Q You mean until further data is obtained?

Right, and we have enough production and enough wells that we can run some pressure data to determine what can be produced out of these wells. We certainly wouldn't want to overdrill this.

Q Were these Exhibits 5, 6, and 7 prepared by you or under your supervision?

A They were.

witness.

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BY MR: STAMETS: 5 8 10 feet to the acre foot? 11 Right. 13 Q Okay. 13 That's right. 14 log interpretation of it. 18 Q 19 appreciable amount of liquids? 20 A 21 22 23

dry -4 35

CROSS EXAMINATION Mr. Nichols, let's go back to Exhibit No. 5 and see what this shows. Now, you have all of the data on here, your net pay calculations, reservoir pressures, gas gravity, deviation from standard gas. Now, your gas in place, if I've got this right, is 43,560 cubic Okay. Now, what is your water saturation in there? Twenty-eight percent. One minus water saturation. One on the second round on the calculations, one minus 28. Twenty-eight percent water saturation over the electric What about liquids? Does that well make any It's essentially a dry gas. We are now making about an average of about one and a half barrels of water a day, but we are not making any condensation. It is a

Now, will this water give you more of a problem or less

MR. BLODGET: We have no further questions of this

		of a problem being complete
		of a problem being completed as a single -
		that this water possibly is filtrated
		have really produced something over a hundred barrels
	٠	of water to date on the sure
		of water to date on the well. We are not in position say that the formation or filtrate water however,
		we don't anticipate much trouble with the water
×	7	production.
	8	Q Is this well connected now?
	9	
		connected. Right.
	10	Q What is its current rate of production?
	11	A It's about one point gir war
	12	A It's about one point six MCF per day. One point six million.
80 0	42	
80	13	the transporter?
	14	A El Paso Natural Gas. This well will go on deliverability
: !	15	test for El Paso beginst
•	16	test for El Paso beginning tomorrow. They will run
	- 1	their four chart periods for about 28 days of
	17	deliverability test on the discovery well starting the
	18	first day of February.
	19	
	20	On the first page of Exhibit 7, I guess those pages,
	- -	you have shown a gas price of 30 cents per thousand for
2	21	the entire period here. Is there no escalation clause
2	2	on this well?
2	3 7	The contract price was and in
2	4	The contract price was established at 30 cents. I'm
_	1	not sure about any escalation. However, the FCP has got us back to 20 cents on this well at the time. We
25	.	

1			are hoping to get back to 30 cents. Our contract with
2		1	El Paso is 30 cents, but I'm not sure if that hasn't
			escalated. I just don't know.
	4 0	!	That very well could make a substantial difference in
	5		the economics projected on this.
	6 2	A	It could, yes.
		Q ,	However, since you've just asked for a two year
		A	Temporary buildwup.
	Ì	Q	Here, this will be reconsidered. Now, what you
			have predicted here is that you'll have a growth
	10: 1		income of \$1,656,000, right, on the 640 acre?
	11	A :	Gross working interest income.
	12	<u>Q</u> -	That's after royalty has been paid?
	13	×	
	14	A	Right. You have your production taxes to be deducted from that?
Σ 1	15	Q	You have your production taxes
Н Н			have your direct
v	16		Your direct operating expenses, have your direct
0 E	Ì	syle S	operating income, your capitol expenditures, which you
・Aと思いるい信用	16 17 18	e e e e e e e e e e e e e e e e e e e	Your direct operating expenses, have your direct operating income, your capitol expenditures, which you would subtract from that, then, to get your net
, EASTOALER	17		operating income, your capitol expenditures, which you
BLOG, EAST•ALBUQUER	17 18 19	A.	operating income, your capitol expenditures, which you would subtract from that, then, to get your net income from each well?
BANK BLOG, FAST BALBUOUER	17 18 19 20	A Q	operating income, your capitol expenditures, which you would subtract from that, then, to get your net income from each well? Right. Okay. Then the same thing is done to Exhibit 2 for
BANK BLOG, FAST BALBUOUER	17 18 19 20 21	,	operating income, your capitol expenditures, which you would subtract from that, then, to get your net income from each well?
BANK BLOG, FAST BALBUOUER	17 18 19 20 21 22	Q	operating income, your capitol expenditures, which you would subtract from that, then, to get your net income from each well? Right. Okay. Then the same thing is done to Exhibit 2 for
BANK BLOG, FAST BALBUOUER	17 18 19 20 21 22	Q	operating income, your capitol expenditures, which you would subtract from that, then, to get your new income from each well? Right. Okay. Then the same thing is done to Exhibit 2 for two wells with the same capacity? Right. And the same gas price?
ANK BLOG. EAST ALBUQUER	17 18 19 20 21 22	Q A Q	operating income, your capitol expenditures, which you would subtract from that, then, to get your new income from each well? Right. Okay. Then the same thing is done to Exhibit 2 for two wells with the same capacity? Right.

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has twice the capital expenditures than the other, and one has more operating expenses than the other. The reserves on the gross working interest income is the same, should be the same.

MR. STAMETS: I wonder if Skelly would mind furnishing us with the information on whether or not there is an escalation clause and what it would amount to.

MR. BLODGET: We would be glad to get you that information.

MR. STAMETS: Two cents a year or half cents a year or whatever it would be.

MR. BLODGET: We can get you the information.

- Mr. Nichols, do you anticipate any problems with these Morrow zones being opened up together? I understand there is a substantial difference in the capacity of the zones.
 - There are considerable differences in capacity. However, the pressures are comparable on the zones. We had a drill stem test in two of the zones which have very limited capacity, but we were recording pressure. We feel like the pressure throughout the zones open are essentially the same. There will be no cross flow between those. We do not anticipate any problem of having the zones open.

You have not brought copies of those tests at this

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time, though? You have those available?

No. We don't. We can get them.

Okay. The examiner would appreciate it if those would be make available.

(Whereupon, a brief discussion was held off the record.)

PAGE 18

We will determine if you, would you just like for us to furnish you with them anyway?

MR. BLODGET: It might be the easiest way.

THE WITNESS: The easiest way would be just to furnish you with a set of them.

MR. BLODGET: More convenient for you anyway.

MR. STAMETS: Right. I have no further questions of this witness. However, I would like to recall Mr. Rodgers. Do you have anything else?

MR. BLODGET: I was just going to offer in evidence these Exhibits 1 through 7.

MR. STAMETS: Without objection, Applicants Exhibits one through seven will be admitted into evidence. witness may be excused.

ELTON RODGERS

was recalled as a witness and having been already duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. STAMETS:

Mr. Rodgers, is the nature of the Morrow formation such that it's discontinuous and the zone may appear in this

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In most fields we have studied, we find that the pay zones are common to most wells than in the field. However, they are not common to all wells. In the case of Cedar Canyon, our second well location was determined by the detmeter data. We used this for depositional string. It indicated that as we moved to the northeast, our sands would be thicker. The sands were thicker at this location in the comparable zone we are producing, The correlations, there is no data to the correlation or the zone. It's six to ten feet in our Section 9 well, and it's 14 to 18 feet gross in our Section 10 well. We did have an additional zone which we are testing below, at the present time below our current perforations in the number one well in the second well. It has high water saturation, and we are just making an attempt to see if it will produce gas.

well and not in the next and vice versa?

What is the nature of the trap here? Is it channel, a bar, a bank --

It's our opinion that these are long short bars, that the sands were coming from the Petranal land mass to the northwest, that these were returned to the basins and stream channels and then were reworked into long shore bars once they reached the sea. In general, these are the long shore bars. I have not worked with them

dearnley, meier & mc cormick

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them producing.

209 SIMMS BLDG. # D.O. BOX 1092 + PHONE 243-6601 + ALBUQUERQUE, NEW MEXICO 87109
1216 F RST NATIONAL BANK BLDG. KAST + ALBUQUERQUE, NEW MEXICO 87108

me that it is their opinion that the long shore bars trend northeast, southwest. Detmeter data seems to confirm this in the one or two wells that we have this kind of data on. The sands do not show, from sample discriptions the sands do not show a great deal of transport. They are still quite angular that they have not moved too far from their source. Is it possible that there could be Morrow zones produced in this area not found in your Section 9 well and not found in your section 10 well which could be developed if other wells were built in these same sections in 320 acres? I suppose this would be possible, yes. The lower zones that we are attempting to test in the Section 10, I don't recall whether it is present in Section 9 as a sand without sufficient porosity or whether it's completely absent there; but it was just one of the zones that showed up in our electric log analysis. The zones, there are two zones immediately above our pay zones and the number 9 well and the number 10 well are two additional zones above it, which were too tight

to produce in Section 9. And we have great hopes for

Why is Skelly asking for a two year temporary period

specifically. Our exploration geologists have advised

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MMS BLDG. + P. D. BOX 1092 - PHONE 243-6691 - ALBUQUERQUE, NEW MEXICO

of rules instead of one year?

This would give us time to ev

This would give us time to evaluate the production we have. We have a working interest block here. There will be subsequent wells drilled on 640 acres initially, and this will give us enough time to determine if this is sufficient spacing or if it is not sufficient.

Q One year wouldn't be enought to do this?

A Well, this would have to be determined by the engineer how long it takes to evaluate the performance of wells.

I'm not competent to do this myself.

MR. BLODGET: Do you have any idea of the size of that working unit that would be involved in that?

THE WITNESS: It's approximately nine sections, I believe. We have an expiring lease in Section 14 which we are now looking at our detmeter data on Section 10 to determine if it's feasible to move into Section 14 with a location.

MR. STAMETS: Are there other questions of the witness? He may be excused. Exyou have anything further to offer in this case, Mr. Blodget?

MR. BLODGET: No, your honor.

MR. STAMETS: Any other statements in this case? We will take the case under advisement.

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S. BOX 1092. PHONE 243-6691. ALBUQUERQUE, NEW MEXICO 67103.

STATE OF NEW MEXICO)

SS

COUNTY OF BERNALILLO)

I, JANET RUSSELL, a Certified Shorthand Reporter, in and for the County of Bernalillo, State of New Mexico do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

CERTIFIED SHORTHAND REPORTER

the Exeminar hearing of the proceedings in the Exeminar hearing of tase No. 1891, heard by me on anacy 3/, 19 23.

Nation Sil Conservation Commission

BLDD. P.O. BOX 1002.PHONE 240.6681.PALBCQURRQUE. 1831 NATIONAL BANK BLDG. EAST-ALBCQURAQUE, NEW

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OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2088 - SANTA FE 87501

February 25, 1975

I. R. TRUJILLO CHAIRMAN

LAND COMMISSIONER PHIL R. LUCERO MEMBER

STATE GEOLOGIST A. L. PORTER, JR. SECRETARY - DIRECTOR

	<i>(</i> -	4899
Ar. Chester E. Blodget	Re:	ORDER NO. R-4477-A
Skelly Oil Company Post Office Box 1650 Tulsa, Oklahoma 74102		Applicant: OCC (Skelly)

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours, Better, J. A. L. PORTER, Jr. Secretary-Director

ALP/ir		ij.			
Copy of order	also sent to:				
Hobbs OCC Artesia OCC _	×		i e	1	
Aztec OCCOther	Mr. L. C. White				

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

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

> CASE NO. 4899 (REOPENED) Order No. R-4477-A

IN THE MATTER OF CASE 4899 BEING REOPENED PURSUANT TO THE PROVISIONS OF ORDER NO. R-4477, WHICH ORDER ESTABLISHED TEMPORARY SPECIAL POOL RULES FOR THE CEDAR CANYON-MORROW GAS POOL, INCLUDING A PROVISION FOR 640-ACRE SPACING UNITS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 5, 1975, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 25th day of February, 1975, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That by Order No. R-4477, dated February 14, 1973, temporary special rules and regulations were promulgated for the Cedar Canyon-Morrow Gas Pool, Eddy County, New Mexico, establishing temporary 640-acre spacing units.
- (3) That pursuant to the provisions of Order No. R-4477, this case was reopened to allow the operators in the subject pool to appear and show cause why the Cedar Canyon-Morrow Gas Pool should not be developed on 320-acre spacing units.
- (4) That the evidence presented establishes that neither of the two completed wells in said pool is draining as much as 320 acres.
- (5) That the evidence establishes that one well in the Cedar Canyon-Morrow Gas Pool cannot efficiently and economically drain and develop 640 acres.

-2-Case No. 4899 (Reopened) Order No. R-4477-A

(6) That in order to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-4477 should be rescinded and said pool should be governed by the Statewide Rules for gas pools in the State effective March 1, 1975.

IT IS THEREFORE ORDERED:

- (1) That effective March 1, 1975, the Special Rules and Regulations governing the Cedar Canyon-Morrow Gas Pool, Eddy County, New Mexico, promulgated by Order No. R-4477, are hereby rescinded and the pool is placed under Statewide Rules for gas pools in the State.
- (2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem

DONE at Santa Fe, New Mexico, on the day and year herein-

OIL CONSERVATION COMMISSION

I. R. TRUJILLO, Chairman

PHIL R. LUCERO, Member

A. L. PORTER, Jr., Member & Secretary

Lucero

SEAL

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

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

> CASE NO. 4899 Order No. R-4477

APPLICATION OF SKELLY OIL COMPANY FOR POOL CREATION AND SPECIAL POOL RULES, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 31, 1973, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 14th day of February, 1973, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Skelly Oil Company, seeks the creation of a new gas pool for Morrow production in Eddy County, New Mexico, and the promulgation of special rules and regulations governing said pool, including a provision for 640-acre spacing and proration units and fixed well location requirements.
- (3) That the Skelly Oil Company Cedar Canyon Well No. 1, located 770 feet from the South line and 770 feet from the East line of Section 9, Township 24 South, Range 29 East, NMPM, Eddy County, New Mexico, having its top perforations at 13,062 feet, has discovered a separate common source of supply which should be designated the Cedar Canyon-Morrow Gas Pool, that the vertical limits of said pool should be the Morrow formation and that the horizontal limits of said pool should be all of said Section 9.
- (4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 640-acre spacing units should be promulgated for the Cedar Canyon-Morrow Gas Pool.

-2-Case No. 4899 Order No. R-4477

- (5) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.
- (6) That special rules and regulations should be established for a temporary period to expire two years from the date of this order; that during this temporary period all operators in the subject pool should gather all available information relative to drainage and recoverable reserves.
- (7) That this case should be reopened at an examiner hearing during the month of February, 1975, at which time the operators in the Cedar Canyon-Morrow Gas Pool should appear and show cause why said pool should not be developed on 320-acre spacing units.

IT IS THEREFORE ORDERED:

(1) That a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production, is hereby created and designated the Cedar Canyon-Morrow Gas Fool, with vertical limits comprising the Morrow formation and horizontal limits comprising the following-described area:

EDDY COUNTY, NEW MEXICO TOWNSHIP 24 SOUTH, RANGE 29 EAST, NMPM Section 9: All

(2) That temporary Special Rules and Regulations for the Cedar Canyon-Morrow Gas Pool, Eddy County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS FOR THE CEDAR CANYON-MORROW GAS POOL

- RULE 1. Each well completed or recompleted in the Cedar Canyon-Morrow Gas Pool or in the Morrow formation within one mile thereof, and not nearer to or within the limits of another designated Morrow gas pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.
- RULE 2. Each well shall be located on a standard unit containing 640 acres, more or less, consisting of a governmental section.
- RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with:

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-3-Case No. 4899 Order No. R-4477

- (a) The non-standard unit consists of quarterquarter sections or lots that are contiguous by a common bordering side.
- (b) The non-standard unit lies wholly within a governmental section and contains less acreage than a standard unit.
- (c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.
- (d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.
- RULE 4. Each well shall be located no nearer than 1650 feet to the outer boundary of the section and no nearer than 330 feet to any governmental quarter-quarter section line.
- RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location of if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the Cedar Canyon-Morrow Gas Pool or in the Morrow formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Artesia District Office of the Commission in writing of the name and location of the well on or before April 1, 1973.

-4-Case No. 4899 Order No. R-4477

That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the Cedar Canyon-Morrow Gas Pool shall have dedicated thereto 640 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 640 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the Cedar Canyon-Morrow

Gas Pool or in the Morrow formation within one mile thereof shall receive no more than one-half of a standard allowable for

- (3) That this cause shall be reopened at an examiner hearing the pool. during the month of February, 1975, at which time the operators in the Cedar Canyon-Morrow Gas Pool may appear and show cause why said pool should not be developed on 320-acre spacing units.
- That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

BRUCE KING, Chairman

munici ALEX J. AMMIJO Member

A. L. PORTER, Jr., Member & Secretary

SEAL

dr/

Dockets Nos. 5-75 and 6-75 are tentatively set for hearing on February 19 and March 5, 1975. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 5, 1975

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM, STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 5406: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Oil Exploration, Inc., General Casualty Company of America and all other interested parties to appear and show cause why the Irwin Well No. 1, located in Unit D of Section 29, Township 21 North, Range 36 East, Union County, New Mexico, and the Irwin "A" Well located in Unit D of Section 29, Township 21 North, Range 36 East, Union County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5407: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Kelly Bell, Travelers Indemnity Co. and all other interested parties to appear and show cause why the Kelly Bell Laroe Well No. 1 located in Unit D of Section 19, Township 27 North, Range 22 East, Colfax County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5408: In the matter of the hearing called by the 011 Conservation Commission on its own motion to permit W. E. Medlock and Reliance Insurance Company and all other interested parties to appear and show cause why the Queen Ridge No. 1 Well located in Unit M of Section 36, Township 10 South, Range 26 East, Chaves County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5380: (Continued & Readvertised)

Application of Amoco Production Company for a non-standard gas proration unit, an unorthodox gas well location, and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a non-standard gas proration unit comprising the S/2 NE/4, SE/4 NW/4, E/2 SW/4, and SE/4 of Section 33, Township 20 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to be simultaneously dedicated to its Gillully "B" Well No. 3, located in Unit N, and its Gillully "B" Well No. 15 to be drilled at an unorthodox location 1980 feet from the North line and 660 feet from the East line of said Section 33.

CASE 5399: (Continued from the January 8, 1975, Examiner Hearing)

Application of Coastline Petroleum Company, Inc., for downhole commingling, San Juan County, New Mexico. Applicant, in the abovestyled cause, seeks approval for the downhole commingling of undesignated Gallup and Basin-Lakota gas production in the wellbore of its Schalk 94 Well No. 1, located in Unit A of Section 26, Township 32 North, Range 8 West, San Juan County, New Mexico.

CASE 4899:

(Reopened)

In the matter of Case 4899 being reopened pursuant to the provisions of Order No. R-4477, which order established temporary special pool rules for the Cedar Canyon-Morrow Gas Pool, including a provision for 640-acre spacing units. All interested parties may appear and show cause why said pool should not be developed on 320-

CASE 4900: (Reopened)

In the matter of Case 4900 being reopened pursuant to the provisions of Order No. R-4478, which order established temporary special pool rules for the West Jal-Fusselman Gas Pool, Lea County, New Mexico, including a provision for 640-acre spacing units. All interested parties may appear and show cause why said pool should not be developed

CASE 5099: (Reopened)

In the matter of Case 5099 being reopened pursuant to the provisions of Order No. R-4683, which order established temporary special pool rules for the South Carlsbad-Wolfgamp Gas Pool, Eddy County, New Mexico, including a provision for 320-acre spacing units. All interested parties may appear and show cause why said pool should not be developed on 160-acre spacing units.

CASE 5409: Application of Atlantic Richfield Company for a non-standard gas proration unit, an unorthodox gas well location, and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 320-acre non-standard gas proration unit comprising the SE/4 of Section 12 and the NE/4 of Section 13, both in Township 24 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico, to be simultaneously dedicated to its George W. Toby WN Wells Nos. 4, 1, and 1-A, located, respectively, in Units A and H of said Section 12 and in Unit A of said Section 13.

CASE 5410: Application of Texas Pacific 011 Co., Inc. for two unorthodox gas well locations, Eddy County, New Mexico. Applicant, in the abovestyled cause, seeks approval for the unorthodox locations of its Berry Well No. 1, to be located 990 feet from the South and West lines of Section 23, and its Hnulik Well No. 1, located 1315 feet from the North line and 660 feet from the West line of Section 26, both in Township 17 South, Range 26 East, Kennedy Farms-Morrow Gas Pool, Eddy County, New Mexico, the W/2 of said Section 23 and the N/2 of said Section 26 to be dedicated, respectively, to said wells.

- CASE 5411: Application of David C. Collier for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of his Kersey Well No. 1-Y, to be drilled 1980 feet from the South line and 2330 feet from the West line of Section 33, Township 18 South, Range 28 East, Artesia Pool, Eddy County, New Mexico.
- CASE 5412: Application of Phillips Petroleum Company for a unit agreement,
 Lea County, New Mexico. Applicant, in the above-styled cause,
 seeks approval of its Eaves Unit Area, comprising 3,496 acres,
 more or less, of State lands in Township 21 South, Range 33 East,
 Lea County, New Mexico.
- CASE 5413: Application of Anadarko Production Company for three unorthodox injection well locations and amendment of Order No. R-4907, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the relocation at unorthodox locations of three of its injection wells in its Artesia State Unit Waterflood Project, all in Township 18 South, Range 27 East, Eddy County, New Mexico, as follows: Well No. 6-2 to 1530 feet from the South line and 1310 feet from the West line of Section 13; Well No. 7-1 to 10 feet from the North line and 2580 feet from the East line of Section 23; and Well No. 10-1 to 1310 feet from the South line and 1435 feet from the East line of Section 14. Applicant further seeks the amendment of Order No. R-4907 to permit administrative approval of unorthodox producing and injection well locations to within 200 feet of the outer unit boundary.
- CASE 5414: Application of Continental Oil Company for an unorthodox gas well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a non-standard 360-acre gas proration unit comprising the SE/4 and E/2 SW/4 of Section 28 and the N/2 NE/4 and NE/4 NW/4 of Section 33, both in Township 20 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to be simultaneously dedicated to its Meyer B-28 A Com Acct. 2 Wells Nos. 2 and 3, located, respectively, in Unit 0 of said Section 28 and in Unit B of said Section 33.
- CASE 5404: Southeastern Nomenclature case calling for the creation, abolishment, and extension of certain pools in Lea and Chaves Counties, New Mexico:
 - (a) CREATE A new pool in Lea County, New Mexico, classified as an oil pool for Abo production and designated as the South Brunson-Abo Pool. The discovery well is the Cities Service Oil Company State P Well No. 4 located in Unit M of Section 32, Township 22 South, Range 38 East, NMPM. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM SECTION 32: SW/4

(b) CREATE A new pool in Lea County, New Mexico, classified as an oil pool for Bone Spring production and designated as the EK-Bone Springs Pool. The discovery well is the Hilliard Oil & Gas, Inc. McElvain Federal Well No. 1 located in Unit J of Section 30, Township 18 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM SECTION 30: SE/4

(c) CREATE A new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the Rock Lake-Wolfcamp Pool. The discovery well is the Amoco Production Company Rock Lake Unit Well No. 1 located in Unit L of Section 28, Township 22 South, Range 35 East, NMPM. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 35 EAST, NMPM SECTION 28: SW/4

(d) ABOLISH the Warren-Blinebry Gas Pool in Lea County, New Mexico, described as:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM SECTION 27: SW/4 SECTION 28: E/2

(e) EXTEND the Blinebry 011 and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM SECTION 27: SW/4 SECTION 28: E/2

(f) EXTEND the Arkansas Junction-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 36 EAST, NMPM SECTION 24: SE/4

TOWNSHIP 18 SOUTH, RANGE 37 EAST, NMPM SECTION 19: S/2

(g) EXTEND the Buffalo Valley-Pennsylvanian Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 27 EAST, NMPM SECTION 24: S/2 SECTION 25: All

(h) EXTEND the Double L-Queen Associated Pool in Chaves County; New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 30 EAST, NMPM SECTION 7: NE/4
SECTION 8: A11
SECTION 9: W/2

(i) EXTEND the Goodwin-Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 37 EAST, NMPM SECTION 19: SE/4 SECTION 30: NE/4

(j) EXTEND the Osudo-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 35 EAST, NMPM SECTION 8: W/2 SECTION 17: N/2

(k) EXTEND the Vada-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM SECTION 12: NW/4

(1) EXTEND the Warren-Tubb Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM SECTION 27: SE/4

CASE 5405: Northwest Nomenclature case calling for the creation and extension of certain pools in San Juan, Sandoval, and Rio Arriba Counties, New Mexico:

(a) CREATE A new pool in San Juan County, New Mexico, classified as a gas pool for Chacra production and designated as the Bloomfield-Chacra Pool. The discovery well is the El Paso Natural Gas Company Chacra Pool. 9 located in Unit P of Section 18, Township 29 North, Range 10 West, NMPM. Said pool would comprise:

TOWNSHIP 29 NORTH, RANGE 10 WEST, NMPM SECTION 7: SW/4
SECTION 18: A11
SECTION 19: A11
SECTION 20: NW/4

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM SW/4 SECTION 4: SECTION 5: SE/4 N/2 & SE/4 SECTION 9: SECTION 10: S/2 5/2 SECTION 11: SECTION 11: S/2 SECTION 12: V/2 & SE/4 A11 SECTION 13: SECTION 14: SECTION 23: E/2 A11 SECTION 24: SECTION 26: E/2

(b) CREATE A new pool in San Juan County, New Mexico, classified as a gas pool for Pictured Cliffs production and designated as the Ojo-Pictured Cliffs Pool. The discovery well is the Dugan Production Corporation Pet. Inc. Well No. 2 located in Unit A of Section 36, Township 28 North, Range 15 West, NMPM. Said pool would comprise:

TOWNSHIP 28 NORTH, RANGE 15 WEST, NMPM SECTION 25: S/2 SECTION 26: SE/4 SECTION 35: NE/4 SECTION 36: N/2

(c) CREATE A new pool in Sandoval County, New Mexico, classified as an oil pool for Menefee production and designated as the Rusty-Menefee Oil Pool. The discovery well is the Chace Oil Company Rusty Federal Well No. 1 located in Unit P of Section 11, Township 22 North, Range 7 West, NMPM. Said pool would comprise:

TOWNSHIP 22 NORTH, RANGE 7 WEST, NMPM SECTION 11: SE/4

(d) EXTEND the vertical limits of the Dufers Point Dakota Oil Pool to include the Gallup formation, rename the pool, and extend the horizontal limits of the Dufers Point Gallup-Dakota Oil Pool, as renamed, to include therein:

TOWNSHIP 24 NORTH, RANGE 8 WEST, NMPM SECTION 2: N/2 & SE/4

SECTION 11: NE/4 SECTION 12: W/2

TOWNSHIP 25 NORTH, RANGE 8 WEST,

SECTION 20: SE/4
SECTION 27: SW/4
SECTION 28: S/2
SECTION 29: E/2
SECTION 34: N/2
SECTION 35: W/2

(e) EXTEND the Aztec-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 10 WEST, NMYM SECTION 7: SE/4
SECTION 8: S/2 & NE/4
SECTION 9: N/2
SECTION 17: NW/4
SECTION 18: A11
SECTION 19: A11
SECTION 32: SE/4

(f) EXTEND the North Aztec-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 30 NORTH, RANGE 11 WEST, NMPM SECTION 13: N/2

(g) EXTEND the Ballard-Pictured Cliffs Pool in Rio Arriba, San Juan, and Sandoval Counties, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 6 WEST, NMPM SECTION 21: SW/4

(h) EXTEND the Blanco-Mesaverde Pool in San Juan and Rio Arriba Counties, New Mexico, to include therein:

TOWNSHIP 25 NORTH, RANGE 4 WEST, NMPM SECTION 3: W/2

(i) EXTEND the East Blanco-Pictured Cliffs Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 30 NORTH, RANGE 4 WEST, NMPM SECTION 23: All

(j) EXTEND the South Blanco-Pictured Cliffs Pool in Rio Arriba, San Juan and Sandoval Counties, New Mexico, to include therein:

TOWNSHIP 23 NORTH, RANGE 1 WEST, NMPM SECTION 17: NW/4

TOWNSHIP 24 NORTH, RANGE 3 WEST, NMPM SECTION 25: SW/4

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM SECTION 19: SW/4

(k) EXTEND the Cuervo-Mesaverde Oil Pool in San Juan County, New New Co., to include therein:

TOWNSHIP 24 NORTH, RANGE 8 WEST, NMPM SECTION 27: SW/4 NW/4

(1) EXTEND the Devils Fork-Mesaverde Oil Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 6 WEST, NMPM SECTION 16: SW/4 NW/4 & NW/4 SE/4

(m) EXTEND the Flora Vista-Mesaverde Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 30 NORTH, RANGE 12 WEST, NMPM SECTION 35: E/2

(n) EXTEND the Fulcher Kutz-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 11 WEST, NMPM SECTION 25: NW/4

(o) EXTEND the Gobernador-Pictured Cliffs Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 4 WEST, NMPM SECTION 19: N/2 SECTION 20: NW/4

(p) EXTEND the Gonzales-Mesaverde Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 25 NORTH, RANGE 6 WEST, NMPM SECTION 12: NE/4 SECTION 1: SE/4

(q) EXTEND the Kutz-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 10 WEST, NMPM SECTION 27: NW/4
SECTION 28: N/2
SECTION 29: N/2
SECTION 30: N/2

(r) EXTEND the West Lindrith-Gallup Dakota Oil Pool in Rio Arriba, County, New Mexico, to include therein:

TOWNSHIP 25 NORTH, RANGE 4 WEST, NMPM SECTION 35: SW/4

(s) EXTEND the Otero-Chacra Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM SECTION 19: SW/4

TOWNSHIP 26 NORTH, RANGE 6 WEST, NMPM SECTION 21: SE/4 SECTION 22: S/2

TOWNSHIP 26 NORTH, RANGE 7 WEST, NMPM SECTION 23: SE/4 SECTION 24: SW/4

(t) EXTEND the Tapacito Pictured Cliffs Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 25 NORTH, RANGE 3 WEST, NMPM SECTION 9: SE/4

TOWNSHIP 27 NORTH, RANGE 4 WEST, NMPM SECTION 21: S/2
SECTION 22: SW/4
SECTION 24: S/2
SECTION 26: NE/4

TOWNSHIP 28 NORTH, RANGE 5 WEST, NMPM SECTION 31: S/2



SKELLY OIL COMPANY

FEB 7 - 1973

Santa For COMM

LAW DEPARTMENT
CHESTER E. BLODGET
SENIOR ATTORNEY

P. O. BOX 1650 TULSA, OKLAHOMA 74102

February 5, 1973

Re: Case No. 4899
Application of Skelly for
Temporary Field Rules,
Cedar Canyon (Morrow) Gas Pool
Eddy County, New Mexico

Case No. 4900
Application of Skelly for
Field Rules,
West Jal (Fusselman) Gas Pool

Alt

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Mr. Richard Stamets New Mexico Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico 87501

Dear Mr. Stamets:

You requested information concerning gas purchase agreements between Skelly Oil Company and El Paso Natural Gas Company covering the wells included in the above two applications.

In connection with the Cedar Canyon gas well, the gas therefrom is covered by a basic contract dated August 25, 1972. We now have a firm rate of 27 cents from the FPC, and have filed for a rate increase to 35 cents which has been suspended to April 24, 1973, at which time we anticipate that the 35-cent rate will go into effect. We hope to get an increase to 36 cents on October 24, 1973. All increases are subject to refund pending a determination of a just and reasonable rate by the FPC.

In connection with the West Jal Well No. 1, the gas from that well is covered by a gas purchase contract dated April 15, 1963 as amended by agreement dated July 26, 1972. We are presently collecting 17-1/2 cents per MCF until February 7, 1973, at which time it will go to 30 cents. This 30-cent rate will be subject to refund, because the FPC has not as yet set a just and reasonable rate. The

Mr. Richard Stamets February 5, 1973 Page 2

contract calls for a one-cent increase per MCF each year.

I am, also, enclosing, as requested, the Drill Stem Test run through the Morrow section on the Cedar Canyon Well No. 1. If there is any further information which we may have, feel free to write me.

Yours very truly,

CEB:br Encl.

Chester E. Blodget

13.00

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

IN THE MATTER OF CASE 4899 BEING REOPENED PURSUANT TO THE PROVISIONS OF ORDER NO. R-4477, WHICH ORDER ESTABLISHED TEMPORARY SPECIAL POOL RULES FOR THE CEDAR CANYON-MORROW GAS POOL, INCLUDING A PROVISION FOR 640-ACRE SPACING UNITS. ALL INTERESTED PARTIES MAY APPEAR AND SHOW CAUSE WHY SAID POOL SHOULD NOT BE DEVELOPED ON 320-ACRE SPACING UNITS.

FORMAL APPEARANCE OF LOCAL COUNSEL

Comes now L. C. White, of the firm of White, Koch, Kelly & McCarthy, P. O. Box 787, Santa Fe, New Mexico 87501 and herewith enters his formal appearance as local counsel for Skelly Oil Company in the above entitled matter.

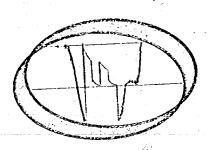
WHITE, KOCH, KELLY & MCCARTHY

By L. C. White

Formation Testing Service Report

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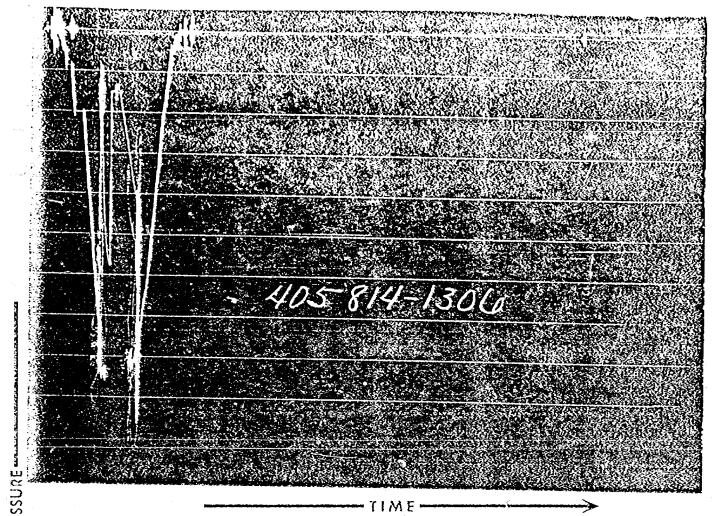
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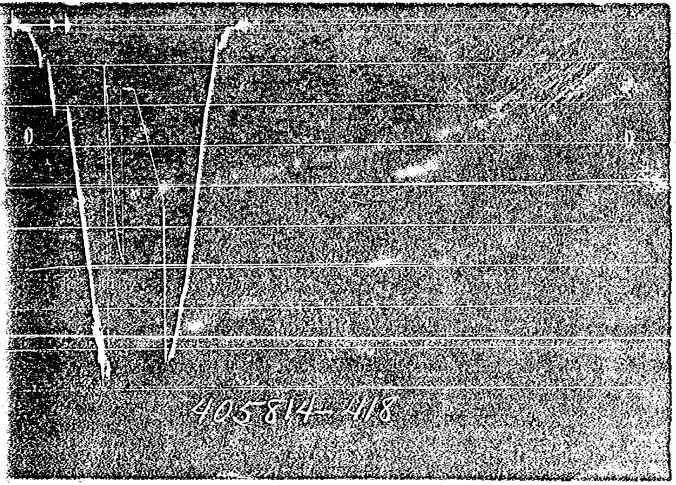


SKELLY OIL COMPANY. EXPL. & PROD. DEPT.

Gune 3 1972 West Central district

Appende i Interior





Each Horizontal Line Equal to 1000 p.s.i.

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DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 31, 1973

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM, STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

- CASE 4897: Application of Coastal States Gas Producing Company for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Gonzales Federal 31 Well No. 1 located 660 feet from the South line and 760 feet from the East line of Section 31, Township 9 South, Range 33 East, Flying "M"-San Andres Pool, Lea County, New Merico, said well being located nearer than 330 feet to another well capable of producing from the same pool.
- CASE 4898: Application of Eastern Petroleum Company for salt water disposal, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in the Dakota formation in the open-hole interval from 1385 feet to 1446 feet in its Navajo Well No. 21 in Unit C of Section 3, Township 27 North, Range 17 West, Table Mesa-Dakota Pool, San Juan County, New Mexico.
- CASE 4899: Application of Skelly Oil Company for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Morrow gas pool for its well located in Unit P of Section 9, Township 24 South, Range 29 East, Eddy County, New Mexico. Applicant further seeks the promulgation of temporary special rules therefor, including a provision for 640-acre spacing units.
- CASE 4900: Application of Skelly Oil Company for pool creation and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Fusselman gas pool for its well located in Unit H of Section 20, Township 25 South, Range 36 East, Lea County, New Mexico. Applicant further seeks the promulgation of temporary special rules therefor, including a provision for 640-acre spacing units.
- CASE 4901: Application of Belco Petroleum Corporation for two dual completions, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Union Mead Well No. 1 located in Unit H of Section 8, and its Union Mead Com Well No. 2 located in Unit N of Section 4, both in Township 22 South. Range 27 East. Eddy County, New Mexico, to produce gas from undesignated Strawn and Morrow gas pools through the casing-tubing annulus and through tubing, respectively.
- CASE 4902: Application of Belco Petroleum Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its James Ranch Unit Well No. 3 located in Unit J of Section 1, Township 23 South, Range 30 East, Eddy County,

Examiner Hearing - Wednesday - January 31, 1973

(Case 4902 continued from page 1)

New Mexico, in such a manner as to produce gas from the Strawn and Morrow formations, Los Medanos Field Area, through parallel strings of tubing.

Docket No. 4-73

DOCKET: REGULAR HEARING - WEDNESDAY - FEBRUARY 7, 1973

OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL, STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

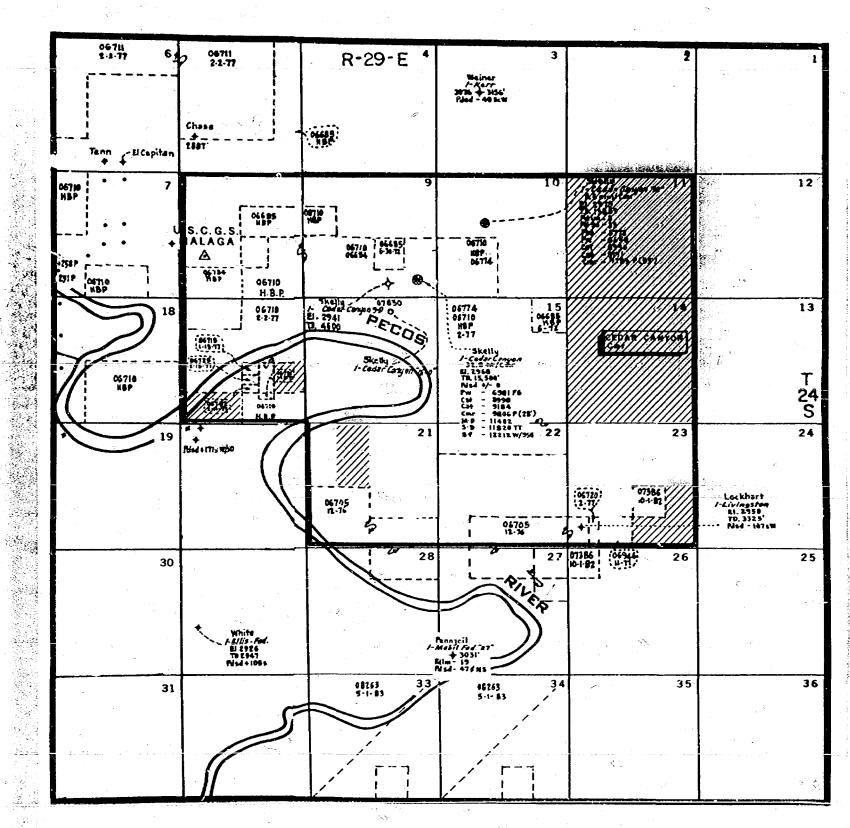
CASE 4796: (Continued from the November 21, 1972 Regular Hearing)

Application of Michael P. Grace II and Corinne Grace for capacity allowable, Eddy County, New Mexico. Applicants, in the above-styled cause, seek an exception to the General Rules and Regulations cause, seek an exception to the General Rules and Regulations governing the prorated gas pools of Southeast New Mexico, promulgated by Order No. R-1670, as amended, to produce their City of Carlsbad by Order No. 1, located in Unit O of Section 25, Township 22 South, "COM" Well No. 1, located in Unit O of Section 25, Township 22 South, Range 26 East, South Carlsbad-Morrow Gas Pool, Eddy County, New Mexico, at full capacity.

(THIS CASE WILL BE CONTINUED TO AN INDEFINITE DATE AND WILL BE READVERTISED BEFORE BEING HEARD.)

CASE 4869: (De Novo)

Application of Claude C. Kennedy for the amendment of Order No. R-4263, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-4263 to prohibit the transfer of allowable to any well located closer than 1320 feet from the outer boundary of the Lone Pine Dakota "D" Unit Area, Lone Pine-Dakota "D" Pool, McKinley County, New Mexico. Upon application of Claude C. Kennedy, this case will be heard de novo under the provisions of Rule 1220.



BEFORE EXAMINER STAMETS OIL CONSERVATION COMMISSION EXHIBIT NO
CASE NO. 4899 Submitted by 5 Kelley
Hearing Date 2-5-73

ACREAGE NO LONGER CEDAR CANYON W.I. UNIT
SKELLY OIL COMPANY WEST CENTRAL E&P DISTRICT CEDAR CANYON GROUP EDDY COUNTY, NEW MEXICO O 2 4 6 8 10 SCALE IN THOUSANDS OF FEET

7,1

CEDAR CANYON MORROW GAS POOL EDDY CO., NEW MEXIGO

Discovery =
August 10, 1972 Skelly 0il Co. Cedar Canyon Well No. 1
32,869 MMCF from Morrow Perf. 12,774 - 14,128.

1ST Prod. Oct. 1972 Cum. gas to 1-1-75 Est. Ult. 406,672 MCF 440,000 MCF

Development
1 Well Skelly Oil Co. Cedar Canyon 10 Well No. 1

1ST Prod. March. 1973
Cum. gas to 1-1-75
Est. Ult.
1,719,229 MCF
2.2 Billion

BEFORE EXAMINER STAMETS OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 4899
Submitted by Stackly
Hearing Date

CEDAR CANYON MORROW GAS POOL EDDY CO., NEW MEXICO

Economic parameters, after federal income tax using three recoveries for the Cedar Canyon Morrow Gas Pool and a development cost of \$1,400,000.

 2.2 Billion estimated ultimate recovery from Cedar Canyon 10 Well #1.
 4.56 Billion volumetric calculation for Cedar Canyon 10 Well #1 using 640 acre drainage.

6.317 Billion - volumetric calculation for Cedar Canyon Well #1 using 640 acre drainage.

DCF Rate of return	(1)	(2)	(3)
	0	11.5	19.8
Profit to investment ratio (Undisc.) Profit to investment ratio (Disc. 10%) Profit (Undisc.) Profit (Disc. 10%)	-0.1 -0.3 -\$194,569 -\$407,417	48 mos. 0.3 0.0 \$446,588 \$ 42,494	40 mos. 0.7 0.2 \$992,003 \$333,048

OIL CONSERVATION COMMISSION EXHIBIT NO. 3 CASE NO. 4899 Submitted by	BEFORE EXAMINER STAMETS
CASE NO. 4899 Submitted by	OIL CONSERVATION COMMISSION
Submitted by	EXHIBIT NO. 3
	CASE NO. 4899
	Submitted by
Hearing Date 2-5-75	Hearing Date 2-5-75

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SKELLY OIL COMPANY WEST CENTRAL DISTRICT

MORROW GAS FIELDS

<u>Field</u>	Pool	Lithology	Spacing
Antelope Ridge	Morrow	Sand	320 acres
* Bell Lake	Morrow	Sand	320 acres
* Carlsbad Drilling Block	Morrow	Sand	
Carlabad, South	Morrow	Sand	320 acres
Cat Claw Draw	Morrow	Sand	640 acres
Cedar Canyon	Morrow	Sand	640 requested
Grama Ridge	Morrow	Sand	640 acres
Golden Lane	Morrow	Sand	320 acres?
	Morrow	Sand	320 acres
* Hat Mesa	Morrow	Sand	320 acres
* Paducah	Morrow	Sand	640 acres
Rock Tank	Morrow	Sand	320 acres
* Salt Lake	*******	Sand	320 acres
* Washington Ranch	Morrow	Sand	320 acres
* Wilson	Morrow	Salla	J_5 40_0

* New Mexico statewide spacing rule - Pennsylvanian or older formations 320 acres spacing

FORE	EXAM	INER	STAM	IETS	
CONS	ERVAT	ION (MMOC	ISSION	
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	CONSI NO	conservat EXHIE NO. 48	CONSERVATION CONSE	CONSERVATION COMM EXHIBIT NO. 4 NO. 4899 and by Skelly - Por	itted by Skelly-Volges

Exhibit No. 1-31-73

EXHIBIT NO. SKELLY OIL COMPANY PROPOSED CEDAR CANYON (MORROW) GAS FIELD EDDY COUNTY, NEW MEXICO

DATA SHEET

DISCOVERY WELL - Cedar Canyon #1 770' FSL, 770' FEL, Sec. 9, T24S, R29E

DISCOVERY DATE - August 10, 1972

PRODUCING FORMATION - Morrow, Top 12,774' (-9806') Base 14,128' (-11,160')

PERFORATIONS - 13,062' - 13,374'

CALCULATED ABSOLUTE OPEN FLOW - 32,868 MCF/D 8-10-72

NET PAY - 10 feet

RESERVOIR PRESSURE - 6017 psig @ 13,360' (-10,392')

RESERVOIR TEMPERATURE - 200° F

GAS GRAVITY - 0.583

GAS DEVIATION FACTOR - 1.095 (Fig. 1.3, Applied Petroleum Reservoir Engineering by Craft and Hawkins)

VOLUMETRIC GAS IN PLACE:

(Sec. 11, Chapt. 1, Applied Petroleum Reservoir Engineering by Craft and Hawkins)

G = 43,560 Ø (1-Sw) Bg i, SCF/ac.-ft.= (43560) (.13) (1-.28) (299)

= 1219 MCF/ac.-ft.

Where: 43560 = cu.-ft./ac.-ft.

 \emptyset = Porosity, % of PV

Sw = Conate Water Saturation, % of PV

Bgi = Initial Gas Volume Factor, SCF/cu.-ft.

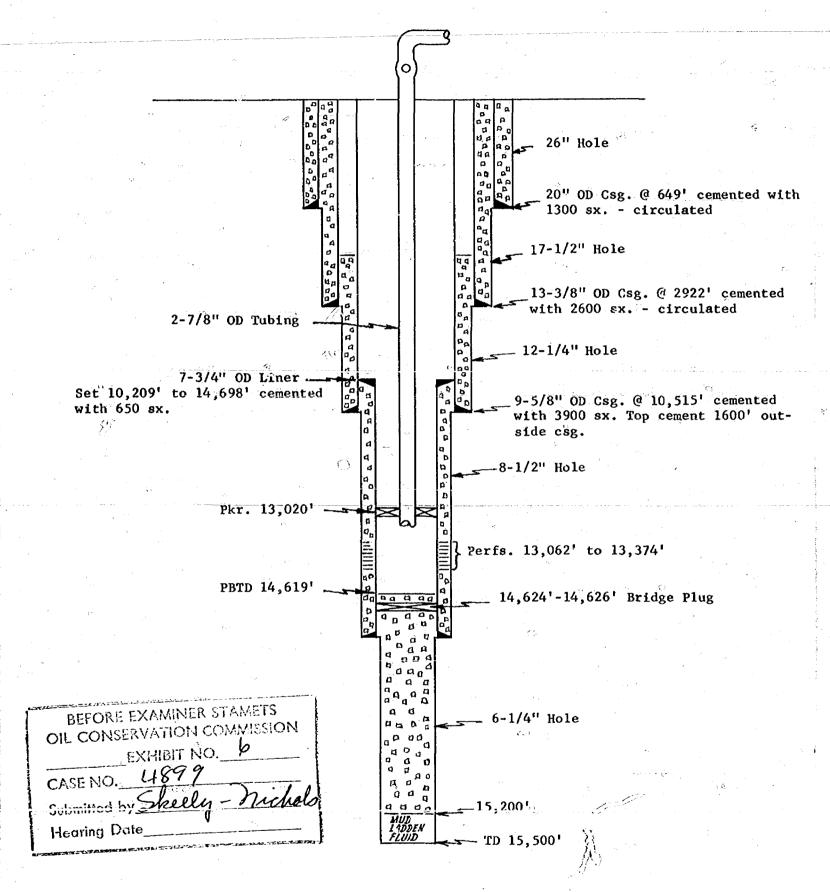
Bga = Abandonment Gas Volume Factor, SCF/cu.-ft.

RECOVERABLE GAS: = 43,560 Ø (1-Sw) $(B_{g_1}^{H_1}B_{g_8})$, SCF/ac.-ft. = 43,560 (.13) (.72) (299-57)

= 987 MCF/ac.-ft.

ULTIMATE RECOVERY PER 640 ACRES: 987 MCF/ac.-ft. x 10 ft. x 640 Acres 6,316,800 MCF

BEFORE EXAMINER STAMETS OIL CONSERVATION COMMISSION EXHIBIT NO. 5 Submitted by_ Hearing Date



Skelly Oil Company Exhibit No. _____

EXHIBIT NO.

X)

SKELLY OIL COMPANY

PROPOSED CEDAR CANYON (MORROW) GAS POOL

ECONOMICS - 640 ACRE SPACING (1 WELL PER SECTION)

DISCOUNTED CASH FLON**** \$ (452,667) 86,988 71,566 64,912 58,877 53,403 48,438 48,438 48,438 43,935 39,850 36,145 32,785 29,737	000,6017
S 8 8 (474,300) 100,700 100,700 100,700 100,700 100,700 100,700 100,700 100,700 100,700 100,700 100,700	806,950
CAPTTAL EXPENDITURES \$ \$ \$ 575,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	575,000
OPERATING INCOME \$ 100,700 100,700 100,700 100,700 100,700 100,700 100,700 100,700 100,700 100,700	1,380,950
DIRECT OPERATING EXPENSES** \$ 12,000 12,000 12,000 12,000 12,000 12,000 12,000 12,000 12,000 12,000	165,000
G.W.I.I. AFTER PRODUCTION TAXES \$ 112,700 112,700 112,700 112,700 112,700 112,700 112,700 112,700 112,700 112,700 112,700 112,700 112,700 112,700 112,700 112,700 112,700	1,545,950
PRODUCTION TAXES* \$ \$,050 8,050 8,050 8,050 8,050 8,050 8,050 8,050 8,050 8,050 8,050	5,775
GROSS WORKING INTEREST INCOME \$ \$/MCF 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.3	86,625 1,656,325
GROSS WORKING \$/MCF 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.3	0°.0 0°.0 0°.0
ANNUAL GROSS PRODUCTION GAS MASCF 460 460 460 460 460 460 460 46	460
YEAR 1973 1974 1975 1976 1977 1978 1980 1981 1982	1985 1986 TOTAL

* \$0.02/MCF ** \$1000/Well-Month *** 10% Per Annum, Discount Factors from Table A-1, Appendix, Oil Property Valuation by R. V. Hughes

NDN January 1973

BEFORE EXAMINER STAMETS

BEFORE EXAMINER STAMETS

OIL CONSERVATION COMMISSION DN LEEKING CASE NO. 4822 Sybrathed by Shell Hearing Date 0

EXHIBIT NO.

SKELLY OIL COMPANY

PROPOSED CEDAR CANTON (MORROW) GAS POOL

ECONOMICS - 320 ACRE SPACING (2 WELLS FER SECTION)

-											
DISCOUNTED CASH FLOW***	(505),581)	(420°084) 69°499 69°499	57,177	51,861	42,666	35,102	31,838 28,878	26,193	5,224	(+11, 174)	
CASH FLOW	(530,650)	(486,300) 88,700	88,700 88,700	88,700	88,700	88,700 88,700	88,700	88,700		056,39	
CAPITAL EXPENDITURES \$	575,000	575,000 0	00	000	00	00	00)	0 0	1,150,000	
OPERATING INCOME S		88,700	88,700	88,700	88,700 88,700	88,700	88,700	38,700	88,700 21,500	1,219,625	
DIRECT OPERATING EXPENSES**	13 000	24,000	24,000	24,000	24,000	24,000	24,000	24,000 24,000	24,000	327,000	
G.W.I.I. AFTER PRODUCTION TAXES	יאי מי פי	112,700	112,700	112,700	112,700	112,709	112,700	112,700	112,700	1,545,950	
PRODUCTION TAXES*	<i>ه</i> ٠	4,025 8,050	8,050 8,050	8,050	0000		8,050 8,050	8,050 8,050 050	8,050	110,425	
GROSS WORKING INTEREST INCOME		30 60,375 30 120,750	30 120,750	30 120,750	120,750	30 120,750	120,750		0.30	0.30 26,250 1,656,375	
JCTION	MMSCF \$/	230 0.	460	0 097	0 797	0 097	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 097		100 0	
	EAK	1973	1975	1976 1977	1978	1980	1981 1982	1983	1985	1987 TOTAL	:

* \$0.02/MCF ** \$1000/Well-Month *** 10% Per Annum, Discount Factors from Table A-1, Appendix, Oil Property Valuation by R. V. Hughes

NDN January 1973

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

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

CASE NO.

APPLICATION OF SKELLY OIL COMPANY FOR AN ORDER FOR THE CREATION OF CEDAR CANYON (MORROW) GAS POOL, AND TEMPORARY SPECIAL POOL RULES, EDDY COUNTY, NEW MEXICO.

ENTRY OF APPEARANCE

COMES NOW L. C. White of WHITE, KOCH, KELLY & MCCARTHY of Santa Fe, New Mexico, and herewith enters his appearance as Resident Counsel for the Petitioner, SKELLY OIL COMPANY, in the above-captioned matter

WHITE, KOCH, KELLY & MCCARTHY

P. O. Box 787

Santa Fe, New Mexico

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BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

DEC 26 1972

OIL CONSERVATION COMM

CASE NO. 486 Sonta Fo

IN THE MATTER OF THE APPLICATION OF SKELLY)
OIL COMPANY FOR AN ORDER FOR THE CREATION)
OF A CEDAR CANYON (MORROW) GAS POOL, AND)
FOR TEMPORARY SPECIAL POOL RULES, EDDY
COUNTY, NEW MEXICO.

APPLICATION

Comes now Skelly Oil Company and states and alleges:

- 1. That it is a Delaware corporation with offices in Tulsa, Oklahoma, and authorized to do business in the state of New Mexico.
- 2. That on August 10, 1972, it completed a gas well in the Morrow Sand formation; that the well is located 770' FSL and 770' FEL, Section 9, Township 24 South, Range 29 East, Eddy County, New Mexico; and that the said formation is found between 13,062' and 13,374' below the surface. The initial CAOF potential of said well was 32,868 MCFGPD.
- 3. That said well is the first gas well producing in the Cedar Canyon Field, and a new gas pool for the Morrow formation should be created and designated the Cedar Canyon (Morrow) Gas Pool.
- 4. That temporary special rules and regulations should be promulgated for the subject pool, including the establishment of 640-acre spacing, in order to prevent the possibility of economic loss resulting from the drilling of unnecessary wells and in order to allow the operators in the subject pool to gather information concerning the reservoir characteristics of the pool.
- 5. That the temporary special rules and regulations should provide for the limited well locations in order to assure orderly development of the pool and to protect correlative rights.
- 6. That the temporary special rules and regulations should be established for a two-year period, and that during this two-year period all operators in the subject pool should gather all available information relative to drainage and recoverable reserves. That at the end of said two-year period a hearing may be had, at which time the operators in the subject pool could appear and show cause why the Cedar Canyon (Morrow) Gas Pool should not be developed on 640-acre spacing units.

WHEREFORE, PREMISES CONSIDERED, applicant prays that this Commission set this matter down for hearing, that notice hereof be given as required by law, and that at the conclusion of said hearing based on the evidence adduced, the Commission enter its order creating a new pool for the Cedar Canyon (Morrow) Gas Pool promulgating temporary special rules and regulations covering said pool, including a provision for 640-acre spacing units; and that the area to be included in said field rules include Section 9, Township 23 South, Range 29 East, Eddy County, New Mexico, and any well drilled within one mile of said Section 9.

Respectfully submitted,

SKELLY OIL COMPANY

George W. Selinger Chester E. Blodget Its Attorneys

By Chuty E. Blodger

Of Counsel: Mr. L. C. White White, Koch, Kelly & McCarthy P. O. Box 787 Santa Fe, New Mexico 87501 DRAFT

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dr/

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

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

CASE NO.4899 (REOPENED

Order No. R- 4477-A

IN THE MATTER OF CASE 4899 BEING REOPENED PURSUANT TO THE PROVISIONS OF ORDER NO. R-4477, WHICH ORDER ESTABLISHED TEMPORARY SPECIAL POOL RULES FOR THE CEDAR CANYON-MORROW GAS POOL, INCLUDING A PROVISION FOR 640-ACRE SPACING UNITS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 5, 1975 at Santa Fe, New Mexico, before Examiner Richard L. Stamets

NOW, on this day of February , 195, the Commission, a question being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That by Order No. R-4477, dated February 14, 1973, temporary special rules and regulations were promulgated for the Cedar Canyon-Morrow Gas Pool, Eddy County, New Mexico, establishing temporary 640-acre spacing units.

-2-Case No. 4899 (Reopened) Order No. R-4477-A

(3) That pursuant to the provisions of Order No. R-4477, this case was reopened to allow the operators in the subject pool to appear and show cause why the Cedar Canyon-Morrow Gas Pool should not be developed on 320-acre spacing units.

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(4) That the evidence presented destates
That reither of the two completed
wells in soid pool is draining
as much as 320 acres

(5) (4) That the evidence establishes that one well in the Cedar Canyon-Morrow Gas Pool can efficiently and economically drain and develop 640 acres.

Order No. R-4477 have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the gas in the pool.

the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-4477 should be continued in the State and offset which the State are for the Commission.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the Cedar Canyon-Morrow Gas Pool, Eddy County, New Mexico, promulgated by Order No. R-4477, are hereby continued in full force and

Placed under Statewide Rules for gas pools in the State.

(2) That jurisdiction of this cause in the commission.

(2) That jurisdiction of this Guase is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

dr/



BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

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

CASE NO.

4899

APPLICATION OF SKELLY OIL COMPANY FOR POOL CREATION AND SPECIAL POOL RULES, EDDY COUNTY, NEW MEXICO. Order No. R-44

NOMENCLATURE

Diana

ORDER OF THE COMMISSION

BY THE COMMISSION:

This ruse came on for hearing at 9 a.m. on January 31 , 19 73 at Santa Fe, New Mexico, before Examiner Richard L. Stamets

NOW, on this day of February, 1973, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Skelly Oil Company, seeks the creation of a new gas pool for Morrow production in Eddy County, New Mexico, and the promulgation of special rules and regulations governing said pool, including a provision for 640-acre spacing and proration units and fixed well location requirements.

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-2-Case No. 4899 Order No. R-

- (3) That the Skelly Oil Company Cock Cunyon Well No located 770 feet from the Section 9, Township 24 South, Range 29 East, NMPM, Eddy County, New Mexico, having its top perforations at 13062 feet, has discovered a separate common source of supply which should be designated the Cedar Canyon Morrow Gas Pool; that the vertical limits of said pool should be the Morrow formation and that the horizontal limits of said pool should be all of soil Section 9.
- (4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 640-acre spacing units should be promulgated for the Coder Canyon -Morrow Gas Pool.
- (5) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.
- for a temporary period to expire consecution from the date that a pipeline connection is first obtained for a well in the pool; that during this temporary period all operators in the subject pool should gather all available information relative to drainage and recoverable reserves.
- (7) That this case should be reopened at an examiner hearing during the mention of the first content of the content of the subject people should appear and show cause why the subject people should not be developed on 320-acre spacing units.

order

-3-Case No. 4899 Order No. R-

IT IS THEREFORE ORDERED:

EDDY COUNTY, NEW MEXICO
TOWNSHIP 24 SOUTH, RANGE 29 EAST, NMPM
Section 9: 7//

(2) That temporary Special Rules and Regulations for the Coder Canyon -Morrow Gas Pool, Eddy County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS

Coder Canyon - Morrow Gas Pool

- RULE 1. Each well completed or recompleted in the <u>Ceder Carron</u>
 Morrow Gas Pool or in the Morrow formation within one mile thereof, and not nearer to or within the limits of another designated Morrow gas pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.
- RULE 2. Each well shall be located on a standard unit containing 640 acres, more or less, consisting of a governmental section.
- RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the

Case No. 4899 Order No. R-

unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are compled with:

- (a) The non-standard unit consists of quarterquarter sections or lots that are contiguous by a common bordering side.
- (b) The non-standard unit lies wholly within a governmental section and contains less acreage than a standard unit.
- the form of waivers from all offset operators and from all operators owning interests in the section in which the non-standard init is situated and which acreage is not included in said non-standard unit.
 - applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located no nearer than 1650 feet to the outer boundary of the section and the nearer than 330 feet to any governmental quarter-quarter section.

-5-Case No. 4899 Order No. R-

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necesitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

IT IS FURTHER ORDERED:

- (1) That the locations of all wells presently drilling to or completed in the <u>Cedar Conyon</u>—Morrow Gas Pool or in the Morrow formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before <u>Paril 1,1973</u>.
- (2) That, pursuant to Paragraph A. of Section 65-3-14.5,

 NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells
 in the Lever Langer -Morrow Gas Pool shall have dedicated
 thereto 640 acres in accordance with the foregoing pool rules; or,
 pursuant to Paragraph C. of said Section 65-3-14.5, existing
 wells may have non-standard spacing or proration units established
 by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 640 acres to a well or to cotain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the Cedar Canyon — Morrow Gas Pool or in the Morrow formation within one mile thereof shall receive no more than one-half of a standard allowable for the pool.

-6-Case No. 4899 Order No. R-

(3) That this cause shall be respende at an examiner hearing at which time the operators in the subject pool may appear and ot pool may appear and show cause why the Said should not be developed on 320-acre spacing units a pipeline connection That the first operator to obtain a well in the for Commiss rder designating will thereupon issue a supplemental ct date for recogning this case. That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary. DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.