CASE 7023: SHELL OIL COMPANY FOR POOL CREATION AND TEMPORARY SPECIAL POOL RULES, ROOSEVELT COUNTY, NEW MEXICO.

CASE NO.

7023

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

EXHIBIT 6

LAND MAP

APPLICATION FOR PROPOSED NEW POOL - STINGRAY (PENN.) FIELD AND TEMPORARY SPECIAL POOL RULES

ROOSEVELT COUNTY, NEW MEXICO

SCALE: 1 INCH = 4000 FEET

APPLICATION OF SHELL OIL COMPANY FOR THE CREATION OF A NEW POOL AND FOR TEMPORARY SPECIAL POOL RULES FOR AN UNDESIGNATED POOL, SECTION 2, TOWNSHIP 5 SOUTH, RANGE 33 EAST, N.M.P.M., ROOSEVELT COUNTY, NEW MEXICO

API# 30-0· -20533

Exhibit No. 7

Form C-105
Revised 1-1-65

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NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease: State ☐ Fee ☒

5. State Oil & Gas Lease No.: NM 20533

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER

7. Unit Agreement Name:

8. Farm or Lease Name: Shell Askew

2. Name of Operator: Shell Oil Company

9. Well No.: 1

3. Address of Operator: P.O. Box 991, 237 T&C, Houston, TX 77001

10. Field and Pool, or Wildcat: Wildcat

4. Location of Well

UNIT LETTER L LOCATED 1980 FEET FROM THE south LINE AND 660 FEET FROM THE west LINE OF SEC. 2 TWP. 55 RGE. 32E NMPM

12. County: Roosevelt

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Cashinghead
4-9-80	5-25-80	7/25/80	4493.2' GR	

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools	Cable Tools
8973'	8280'		→	Rotary	

24. Producing Interval(s), of this completion — Top, Bottom, Name: 7733'-7763'

25. Was Directional Survey Made: No

26. Type Electric and Other Logs Run: MLL/ML, GNL/GR

27. Was Well Cored: Yes

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
20"	conductor	40'	24"	40 sx Redi Mix	0
13 3/8"	48#	412'	17 1/2"	550 sx Class C	0
8 5/8"	32#	3325'	12 1/4"	750 sx Class H,800sx Lite	0
5 1/2"	17,20,15.5,14	8330'	7 7/8"	1770 sx Class H	0

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 7/8"	7575	7575

31. Perforation Record (Interval, size and number)

7733'-7763' 15 holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
7733-7763	2000 gals 7% HCL
	3000 gals 20% HCL

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping — Size and type pump)	Well Status (Prod. or Shut-in)
6/30/80	swabbing	shut-in

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas — Oil Ratio
6/30/80	8	--		25	TSTM	48	--

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity — API (Corr.)
0	0		75	TSTM	144	43.4° @60°F

34. Disposition of Gas (Sold, used for fuel, vented, etc.): No gas recorded

Test Witnessed By:

35. List of Attachments: Inclination Survey

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED A. J. Fore TITLE Senior Engr. Technician DATE 7-25-80

EXHIBIT No. 8

DATA SHEET

SHELL ASKEW NO. 1-2

PHYSICAL PROPERTIES OF RESERVOIR ROCKS

Average Porosity (%) = 7 (log analysis)

Average Permeability (md) = 3 (core analysis)

Average oil and interstitial water saturations (%) = So 69
Sw 31

RESERVOIR FLUID CHARACTERISTICS

Average Gravity of Oil --- 44.4 API @ 60°

Average Gravity of Gas --- 1.0827 @ 60°

Formation Volume Factor --- 1.1

Viscosity of Oil (Centipoises) --- 0.758

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
1 October 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Shell Oil Company for pool creation and temporary special pool rules, Roosevelt County, New Mexico.

CASE 7023

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: Owen Lopez, Esq.
MONTGOMERY, ANDREWS
Paseo de Peralta
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

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MR. NUTTER: We'll call next Case Number 7023.

MR. PADILLA: Application of Shell Oil Company for pool creation and temporary pool rules, Roosevelt County, New Mexico.

MR. LOPEZ: Mr. Examiner, my name is Owen Lopez with the law firm of Montgomery and Andrews in Santa Fe, New Mexico, appearing on behalf of the applicant, and I have two witnesses to be sworn.

(Witnesses sworn.)

MR. NUTTER: Are there other appearances? Please proceed, Mr. Lopez.

WALT V. BOYLE

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. LOPEZ:

Q. Would you please state your name, by whom you're employed, and in what capacity?

A. Okay. My name is Walt Boyle.

MR. NUTTER: How do you spell that last

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name?

A. B-O-Y-L-E. W. V., middle initial V. I am employed by Shell Oil Company in Houston, Texas. I have a degree from the University of Texas in geology, a B.S., and also a Masters degree.

I have worked in West Texas and New Mexico approximately fifteen years and I'm presently the supervisor for the New Mexico/West Texas area for Shell Oil Company.

Q. Have you previously testified before the Commission and had your qualifications accepted as a matter of record?

A. No, sir, I have never testified before New Mexico Commission.

Q. You have briefly described your employment background and educational background, as well. Are you familiar with the application of Shell in Case Number 7023?

A. Yes, sir, I am.

Q. And what is it that Shell proposes to seek in this case?

A. Shell seeks the creation of a new Pennsylvanian oil pool for its Shell Askew Well No. 1, located in Unit L of Section 2, Township 5 South, Range 33 East, Roosevelt County, New Mexico, and the promulgation of a special pool rules thereof -- therefor, including a provision for 80-acre spacing.

MR. LOPEZ: Are the witness qualifications acceptable?

MR. NUTTER: Yes, they are.

Q. Mr. Boyle, I would ask you to refer to what has been marked as Exhibit Number One and ask you to identify it.

A. Yes, sir. Mr. Examiner, Exhibit One is an index map of the oil and gas production in southeastern New Mexico and West Texas. The area, the Shell Askew No. 1-2, our discovery well, is shown in Roosevelt County. Just a little southeast of there is the Peterson Field, which produces from the Pennsylvanian-Wolfcamp-Alphabet formations. The areas in green down in the southern part of Roosevelt County, Lea, and Lea County, are also Pennsylvanian-Wolfcamp-Alphabet producing fields.

Q. Now I'd ask you to refer to Exhibit Number Two and describe it.

A. Mr. Examiner, Exhibit Number Two is a map at the scale of 1" equal 1000'. You'll notice in Section 2 of 5 South, 32 East, is the location of the Shell 1-2 Askew. To the southeast about three miles is Peterson Field, which is -- has at the present time seven wells producing from the Penn-Alphabet formation.

Also, in Section 14 is the Williams-Tucker Well, which is a dry hole, and in Section 16 of 5, 32,

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is the Phillips-Silas, which is also a dry hole. Both of those tested the Alphabet formation, Penn-Alphabet, and found it to be noncommercial.

So this is, in summary, just a large scale map showing all of the wells that have been drilled in this area.

Q. Now referring to Exhibit Number Three, would you please describe that?

A. Mr. Examiner, Exhibit Three is a copy of the borehole compensated sonic gamma ray log run on our Shell Askew No. 1-2, Section 2, 5 South, 32 East. It has, as you can see, the appropriate tops marked on the log, the drill depths and the subsea depths. These are the tops that are used in the industry in this area, and if you will note, at a depth of 7610 is what we've designated the Wolfcamp-Penn-Alphabet section, and then our producing interval in the -- in the Penn-Alphabet perforated from 7733 to 7763.

MR. NUTTER: Mr. Boyle, I'm not familiar with this so-called Penn-Alphabet series. What are you referring to there?

A. This is a term that at least Shell uses and quite a few of the companies that operate in this area. Sometimes it's just -- you just -- it is referred to as the Penn formation. It originally goes back many years to the Bough formations, the Bough A, B, and C.

wondering.

MR. NUTTER: Okay, that's what I was

A. Yes, sir.

MR. NUTTER: Are you definitely out of the Wolfcamp?

A. Well, sir, to be technically, to answer that technically, Shell, by fusilinid it's the Bough A and the B zones. We, by fusilinid would say that's Wolfcamp, but the top of the Bough C, that's Penn. The industry just usually says that's Penn.

MR. NUTTER: Okay, now what would your perforations be in here?

A. Our perforations would be in the Penn and we think, as close as we can correlate, that these would probably be what we designate Alphabet D and F, but I purposely left them off because the correlations are kind of --

MR. NUTTER: But it is definitely below the C.

A. It is definitely below the C zone, yes.

MR. NUTTER: So there's no question here, this is Pennsylvanian rather than --

A. Yes, sir.

MR. NUTTER: -- the Wolfcamp pay?

A. Yes, sir, that is correct, yes, sir.

MR. NUTTER: Just wanted to clear that

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point.

A. Yes, sir, good point, yes, sir. I know all the companies have, you know, sometimes a little bit different twist on how they -- how they call some of these zones.

MR. NUTTER: Sometimes if we can't solve it any other way, we just call it Permo-Penn.

A. Permo-Penn, if you wish to do that, that's fine.

MR. NUTTER: No, you said you're definitely in the Penn.

A. Yes, that's correct, by fusilinids, yes, sir. By fusilinid examination these have been designated Pennsylvanian.

Q. Now referring to Exhibit Four, would you please describe this exhibit?

A. Yes, sir. Exhibit Four is a structure map at a scale of 1" equal 4000', covering the area around the Shell Askew No. 1 discovery in Roosevelt County. If you will look over on the right side of the map, this is the, what we call the type log. It is a log, again, the gamma ray sonic log, of the Shell Askew, again, the top of our Alphabet series is at 7610. Our perforations, our Penn perforations at 7733 to 7763. This map is drawn on, again, Shell terminology, what we call Permian "OM" zone, designated on the log at 7268. The reason we use this is we feel that this is a

good correlative structural marker; it's a time marker. It's about 300 feet above the Alphabet, but that is the -- that is the structural marker that the map is prepared on.

If you will look in Section 2 of 5, 32, again the Shell Askew, you will see the top of the "OM" there is at a -2762. The dry hole I had referred to earlier, the Williams-Tucker in Section 14 in 5, 32, is at 2943, and if we go to Peterson Field, which encompasses Sections 8, 17, 18, 19, and 20, in 5, 33, these are the -- this is the Peterson Field and it's so designated -- the structural elevations there are -- range from -2830 to -2841.

The point I want to make on this, Mr. Examiner, is that there is a structural low or separation between the Shell Askew in Section 2, 5, 32, and the Peterson Field, Penn field, located in Sections 17, 18, 19, and 20, 5, 33.

Structurally from the -- about the lowest point of 2950 to -- to the Shell Askew, there's about 100 -- you have to come up structurally about 188 feet, and then if you take from, again, the 2950 contour up to one of the lower wells in Peterson Field, for example, Well NO. 1, the Amoco Radcliffe, in the southwest of the southwest of 17, you come up some 110 feet. So again to reiterate, what this -- what we wanted to show on this map is that there is a structural separation between the Shell Askew and the Peterson Field,

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and we feel that those are two separate reservoirs.

Q This exhibit also shows, does it not, that there are no other producing wells within the vicinity of the Shell Askew Well?

A Yes, that is correct; that's true.

Q Okay. Now referring to Exhibit Number Five, would you please describe it?

A Exhibit Number Five is more or less a north/south structural cross section hung on a datum of -3000 feet. Again, if you will refer to the index map in the right side of the cross section, the map is on a scale of 1" equal 8000'. It goes from Well No. 1, located in Tanneyhill Field, through South Peterson Field, which is productive from the Penn-Alphabet, and from the Pre-Mississippian, or I think as it's designated, Fusselman, up into Peterson Field, northward into Peterson Fields, which is mainly productive from the -- from the Penn-Alphabet, to Well No. 11, which is the Shell Askew.

And what we want to demonstrate on this section is that if you will observe, say, Peterson Field, from Well 6 to Well 8, it is on a structural high, and then you can see the sag that I referred to in Exhibit Four, say, take for example, the top of the Penn-Alphabet, you can see the structural sag goes down and then comes back up to our Shell Askew No. 1-2, our proposed Stingray Field, and again, this

just is prepared to -- to show that there is in fact a structural sag between Peterson and the Shell Askew 1-2.

The Pennsylvanian production seems to be productive from, say, from the C zone clear on down into E and F zone, if you'll look at Well No. 7, it's productive; appears they have perforated that interval. In Well No. 6 it looks like it's productive in the E and F zones and -- yeah, okay, I'll just stop right there.

So the production does vary from zone to zone.

Q. Now referring to Exhibit Number Six, would you please describe that?

A. Exhibit Number Six is simply a land plat in Roosevelt County, New Mexico, at a scale of 1" equal 4000. It simply shows the location of the Shell Askew No. 1-2 some 660 feet from the west line and 1980 from the south line in Section 2 of 5, 32, and also, if you drop about three miles to the southeast, in green is the Peterson Field.

Q. On what spacing has the Peterson Field been developed?

A. Presently the Peterson Field is -- appears to be developed on 80-acre locations.

Q. And in your opinion the production is from the same zone as the Shell Askew No. 2? Or No. 1?

A. Yes, sir, there are zones in Peterson

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Field which are also productive from the same zone in our Shell Askew 1-2.

Q. All right. Were Exhibits One through Six prepared by you or under your supervision?

A. They were prepared under my supervision and by me, also, a combination.

MR. LOPEZ: Mr. Examiner, I'd offer Shell's Exhibits One through Six.

MR. NUTTER: Applicant's Exhibits One through Six will be admitted in evidence.

MR. LOPEZ: I have nothing further for this witness.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Boyle, I think you made a good case for creation of a new pool, but I haven't seen anything yet to justify the 80-acre spacing.

MR. LOPEZ: That's the second witness, Mr. Examiner.

A. We have a --

MR. NUTTER: Okay. We'll let Mr. Boyle go, then. He's got the evidence for the new pool.

MR. BENESCHEK: Mr. Examiner, is it time now for me to ask a question of the witness?

MR. NUTTER: Yes, sir, if you want to ask a question.

MR. BENESCHEK: Yes, sir, I'd like to, if I could.

QUESTIONS BY MR. BENESCHEK:

Q. I'm H. W. Beneschek, royalty and mineral owner in the area, formerly with Shell Oil Company, formerly a Chairman of the School of Petroleum Engineering, University of Oklahoma.

Would you mind telling me what the porosity, permeability, and initial production is on the Askew Well?

MR. LOPEZ: It will be answered.

MR. BENESCHEK: Oh, that's coming up?

A. Yes, sir, that's --

MR. LOPEZ: With the next witness.

MR. BENESCHEK: That will be with the next witness?

A. Yes, sir, it is. Mr. Tabakol is a reservoir engineer and the way we set this up is for me to present the --

Q. Okay.

A. -- geology and then he'll talk about the reservoir.

Q Okay, then I have another question, which you did allude to, or comment, Mr. Examiner, if it's all right. You made a statement that the, Mr. Boyle did, that the Peterson Field is on 80-acre locations. I am under a well, Penn well in the Peterson Field, that's on 160 acres. I concur with 80 acres, or preferably 40 acres, as called out in the rules of the Commission, but I am under 160 acres in the Peterson Field under a Penn well.

I just wanted to point that out --

A Okay.

Q -- but you said 80 acres.

A. Yes, I was under the impression that most of the fields down there are under 80 acres. Now, I could be wrong on that.

Q. I think it's South Peterson.

A. So Peterson is under 80?

Q. 160.

A. I mean 160, yes, 160?

Q. I am under 160 myself.

A. Okay.

Q. I know, I'm losing half my income.

A. Okay. Okay.

MR. BENESCHEK: That's all I have, Mr. Examiner, from this witness.

MR. NUTTER: Are there any questions for

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Mr. Boyle? He may be excused.

A. Okay, thank you.

MIKE TAVAKOL

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. LOPEZ:

Q. Would you please state your name?

A. Mr. Examiner, my name is Mike Tavakol. I'm working for Shell Oil Company.

MR. NUTTER: Would you spell your name, please?

A. T-A-V-A-K-O-L. Mike Tavakol.

Q. In what capacity are you employed by Shell?

A. Reservoir engineer.

Q. Have you previously testified before the Commission and had your qualifications accepted?

A. No, sir.

Q. Would you therefor briefly describe your educational background and employment experience?

A. Yes. I have a BS in petroleum engineering from Louisiana State University. I also have a BS in chemical

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engineering from Louisiana State University, and I've been working for Shell for 2-1/2 years and currently I'm pursuing a Masters degree in petroleum engineering.

Q. When did you graduate from Louisiana State University?

A. May, '78.

Q. And you've been working with Shell since that time?

A. That's correct.

Q. And is the area which is the subject of this application part of your responsibilities?

A. That's right.

MR. LOPEZ: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are. You're stationed in Houston, are you?

A. Yes.

MR. NUTTER: Okay, he's qualified.

Q. Mr. Tavakol, I'd ask you to refer to what has been marked Shell's Exhibit Number Seven and ask you to explain that.

A. Okay, that's New Mexico Oil Conservation Commission Form C-105, which shows a completion record, as you see. It shows the location of the well, being 980 feet from the south line and 660 feet from the west, Section 2,

5 South and 32 East.

It also shows that the well was completed in July 25, 1980. It shows the completion interval being from 7733 feet to 7763 feet. It shows the logs that we obtained. It also shows the casing record and cement, the tubing, which is 2-7/8ths inch. It also shows the stimulation that we -- the stimulation that we undertook for this well, being 5000 gallons of acid. On June 30th we had a swab test which showed a rate of 25 barrels of oil per day with 48 barrels of water per day, this being in eight hours. Taking it in 24 hours, it would be 75 barrels of oil per day and 144 barrels of water per day; however, we acquired current -- newer tests and right now it seems like the oil production would fluctuate anywhere from 20 to 30 barrels of oil per day and the water being around 25 barrels of water per day.

Any question?

Q. Now if you'd refer to Exhibit Number Eight and I'd ask you to explain that.

A. Okay. This shows limited data that we have been able to obtain so far. It shows the physical properties of the reservoir rocks. By log analysis we were able to obtain 7 percent porosity and by core analysis we were able to obtain permeability of 3 millidarcies. By log analysis we were able to obtain recovery -- the well saturation of 31 percent. Reservoir fluid characteristics show that we have

gravity, oil gravity of 44.4 API at 60° F; the gas gravity at the same temperature is 1.0827. The formation volume factor is estimated at 1.1 reservoir barrel per standard tank barrel. The viscosity of oil is .758 centipoise, and that's all we have been able to get so far.

I should emphasize that this data are very similar to the surrounding area in the same reservoir, being South Peterson and Peterson Penn and they are reasonably close, so we're confident that they are correct properties for the rocks and the fluids.

Q. Now I'd ask you to refer to Exhibit Number Nine and describe that.

A. Okay. This shows that other pools in the area completed in the same -- in the Pennsylvanian formation that have been granted 80-acre spacing and more, which is 160 acres for Vada-Penn.

Q. And for what reason have you requested the special pool rules? What is the basis for your request for the special pool rules?

A. Okay. Number one, our reservoir study, based on volumetric calculation and production performance of other Pennsylvanian pools in the area, has revealed that the reservoir will be drained efficiently with 80-acre spacing.

Number two, economic analysis has shown that the effective use of a minimum number of wells is essen-

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tial to the economic depletion of the reservoir and development cannot be justified on less than 80-acre spacing.

Also, as I mentioned earlier, other pools in the area have been granted 80-acre spacing and more.

Q. And these other pools have production from the same zone?

A. That's correct.

Q. In your opinion, Mr. Tavakol, would the granting of this application be in the interest of prevention of waste and the protection of correlative rights?

A. That's right, sir.

Q. Were Exhibits Seven through Nine prepared by you or under your direction?

A. They were prepared by me.

MR. LOPEZ: I have -- I would offer Shell's Exhibits Seven through Nine.

MR. NUTTER: Applicant's Exhibits One through -- Seven through Nine will be admitted in evidence.

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

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Tavakol, you stated you believe that one well would drain 80 acres. Isn't this permeability, being

only 3 millidarcies rather low for --

A. No, sir, other reservoirs, I mean as I mentioned, it is very close to other pools in the area, and I have studied other wells as much as I could, and they have shown that 80 acres will be drained by -- by one well.

Q. You don't have any evidence as to what the permeability is in any of these other reservoirs here.

A. No, I guess I haven't shown the permeability for the reservoirs.

MR. LOPEZ: If we could go off the record for a second.

A. We do have an exhibit that shows the porosity and net pay and the water saturation but not the permeability.

Q. Of this reservoir?

A. On other pools, yeah.

(There followed a discussion off the record.)

MR. NUTTER: We'll go back on the record, Owen, and you can ask him about that.

A. The reserves ---

Q. Okay, could you provide the Commission with additional evidence and testimony as to the basis on which

you base your belief that the temporary pool rules are necessary and that 80-acre spacing will efficiently and effectively drain -- one well on an 80-acre proration unit will efficiently and effectively drain that proration unit?

A. Okay. Based on volumetric and investigation on recovery efficiency for this area, I have -- I was able to estimate recovery efficiency on the range of 12 to 20 percent of oil in place, and by studying the performance of other wells in the area, I established that the decline rate for the zone renders anywhere from 30 percent to 50 percent per year, average being 40 percent per year.

By simultaneous calculation of volumetric and decline rate amounts, I was able to obtain a drainage area of 85 acres, assuming 15 barrels of oil per day, which is current production that we have.

Q. These calculations of other wells in the area, these wells that you studied were wells producing from the same formation in other pools.

A. Yes.

Q. And in these studies did you compare the relative permeabilities and porosities and water saturations of these other wells, and if so, what was your conclusion?

A. My conclusion was that the rocks and the fluids were very similar and they should have a similar performance, therefor.

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Q. (By Mr. Nutter) Have you made any rough estimate of the reserves in place --

A. Yes.

Q. -- under 80 acres as opposed to 40 acres here?

A. Yes. Well, for 80 acres the range would be 20,000 to 100,000 barrels -- from 20,000 to 100,000 barrels, the range.

Q. That's on --

A. The recovery.

Q. -- an 80-acre tract or --

A. 80-acre tract, uh-huh.

Q. Now you calculated that a well would drain 85 acres.

A. Well, that was -- I round it off to 80 acres because -- as uncertainty for the calculations, but 85 acres was the number that theoretically I got, and --

Q. Well, that's quite a range of -- of -- now 20 to 100,000, is that recoverable reserves or oil in place?

A. Recoverable reserves. As I mentioned, the recovery efficiency was -- I had to vary the recovery efficiency, and since we do not have any fluid, actual fluid data, I should mention volumetric, for example, we do not have any fluid sample at this time, so the formation volume factor is

estimate and also is the viscosity fluid, and those have a very big factor in estimating recovery efficiency and the volumetric.

Q. Well, your -- your estimate of recovery efficiency is from 12 to 20 percent, which is a variation of less than 2, but your estimate of reserves is from 20 to 100,000 barrels, which is a factor of 5.

A. Yes, sir, that was because we have had production rates of anywhere from 15 to 75 barrels of oil per day.

Q. Uh-huh.

A. So here again, at this time I did not know what would be the production so I had to make a range of production from 15 to 75.

Q. Well, didn't you state that the current production is running between 20 and 30 barrels per day.

A. That's correct, but this is not the stabilized rate yet, so we -- we might have --

Q. How long has the well been on production?

A. To the best of my knowledge, it's been a month, but it's been fluctuating, as I mentioned, from 75 to 15, and we might do some stimulation on the well, which could raise the production to again, 70 -- and again, other wells in the area have shown sometimes 200,000 barrels of oil per day. I'm sorry, 200 barrels of oil per day.

Q. Uh-huh.

A. So we might have by stimulation, it might increase the production rate, but this is too early to say. That's why I say, I could not give a specific number. It just depends on what would be the fluid properties and what would be the production rate that we might end up with.

Q. Uh-huh.

A. And also there is another thing, we haven't been able to get any gas from the reservoir, which we suspect some kind of possible damage in the zone, and as you know yourself, it's probably lower -- the low permeability, which we might increase. So in that case, if we get gas production up, we might get a better production rate.

Q. Well, you stimulated with 5000 gallons of acid but you've got 30 feet of perforations there.

A. And the perforations are 30 feet, but the net pay we estimated would be about 4 feet, that's --

MR. [illegible]: 4 to 5.

A. 4 to 5 feet, and that's another factor that I feel confident that we might get area drained because of the limited reservoir limits.

Q. Well, it appears your water/oil ratio is going down, however, isn't it?

A. That's -- that's right. That's what we have seen.

Q. But the gas production has not gone up at all.

A. Well, at one time -- first it was too small to measure, but then it went to 10 Mcf per day and one time 20, but then it went down again, so we were trying to -- I did -- we did try to get a fluid sample and since we have water production we could not get a downhole sample, and then we tried to get the surface sample, but we did not have a GOR accurately measured, so we could not get a fluid sample, and that's the reason that our data is limited, and we try to wait until we get a good GOR and possibly get a fluid sample through a combination of the surface materials.

Q. Well now, --

A. But I should mention again that economics also showed that we won't be able to really develop on this field on 40-acre spacing unless we have some higher production rates so we could payout our expenses.

Q. Do you know whether Shell has any plans for drilling a second well in here or not?

A. We are thinking of this.

Q. But you haven't made any definite commitment to a second well?

A. We're trying to wait to see exactly what happens to this well. Once we get good data and reasonably estimated reserve and payout, but the difference, and this I

noted, 40-acre is out of the picture because it won't pay for the expenses, but 80-acre, we feel confident that it would pay out, but we are waiting for more data and we are waiting for better production rate.

Q. Is this well flowing or pumping?

A. It's pumping.

Q. What did the well cost to drill and to complete, including pumping unit?

A. Close to $1-million.

Q. Now, on this Exhibit Number Six, I notice that the well is drilled on a lease that's called the C. W. Williams, Jr. lease. Does Shell own that lease now?

A. We farm that unit.

MR. LOPEZ: We might refer to Mr. Boyle to answer that question.

MR. NUTTER: Mr. Boyle?

MR. BOYLE: Yes, sir, this was the lease that -- we had an anomaly in this area, and part of the anomaly was on Clayton Williams' acreage, and so we went to Mr. Williams and negotiated a contract with him to farm that acreage in, and in the farmout we got a -- we gave him -- he has an eighth until the well is paid out and then he has an option to come in for a 41 percent working interest, and we have a 59 percent working interest.

MR. NUTTER: Well, it would appear from

Exhibit Six that the Williams lease --

MR. BOYLE: That is part that we -- that is part of our acreage that we got a farmout from Williams. We farmed out Section 2 and Section 3.

MR. NUTTER: So you've got a farmout there covering --

MR. BOYLE: Yes.

MR. NUTTER: -- two full sections.

MR. BOYLE: Two full sections, correct.

MR. NUTTER: And you also have some acreage to the north there.

MR. BOYLE: And we have acreage in there, so that is -- that is the reason that -- and we do have, we have plans to drill either in Section 2 -- or in Section 3 or the west -- or the east half of 2. Both of those are separate leases.

I might also add that in -- with what Mr. Tavakol mentioned, that he is correct, at this time it is rather early to try to estimate volumes. I think from -- he has -- he has some data which we could offer as an exhibit, but if you go down to Lea County and Chaves County, there's just -- just by analogy, there are wells that produce out of the Bough that are anywhere from 4 feet to 8 feet of pay, and 7 to 8 percent is the average porosity, and water saturation is from 30 to 35. We do have data to back that up, and so

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based on that sort of empirical data of 30 to 35 percent water saturation, of porosity of 7 to 8, and pay ranging from anywhere, some of them 3 feet to 8 feet, 10 feet, we thought that at least initially we would ask for 80 acres.

MR. NUTTER: Okay, now you covered all of the reservoir factors with the exception of permeability. How does this permeability compare with those reservoirs?

MR. BOYLE: I -- I don't know.

A. It is -- I tried -- I tried to obtain this data. The data is very limited.

MR. BOYLE: It's pretty hard to do.

A. I really -- it was hard. I tried the Commission to get some public data and I could not get any permeability.

So -- but I just feel since everything else is similar, so permeability should be similar, too. We have the same porosity, same water saturation.

MR. NUTTER: Same thickness of pay.

MR. BOYLE: Those -- those are figures that you can figure off of the sonic or gamma ray or density logs, even though that other data, most of the time, isn't available, so the permeability, at least, so that's what we're basing this on.

MR. LOPEZ: I might ask Mr. Boyle, your plans or intentions to drill a second well on this farmed out

acreage, as well as your own acreage, is dependent upon the success of this application in large part, is it not?

MR. BOYLE: That is, yes, that is somewhat correct, yes, sir. We have a -- if I may speak again -- we have an agreement with Mr. Williams that this is on a drill to earn basis, and with 120 days between wells, and this well was -- was filed with the Commission on June 25th, 1980, but subsequent to that we went up and tested the San Andres and spent about three to four weeks, almost a month, testing the San Andres. It proved to be water-bearing, so they dropped back down and started pumping again, the -- pumping the San Andres -- pumping the Penn, and we did have some pump problems.

MR. NUTTER: Thank you. Are there any further questions of Mr. Tavakol?

MR. BENESCHEK: Mr. Examiner, I have a question.

MR. NUTTER: All right, sir.

QUESTIONS BY MR. BENESCHEK:

Q. I don't recall that you asked the price of oil; you can't very well know the economics unless you know the price of oil that you're going to get down there.

A. What -- what is the price of oil?

Q. Yes, what are you going to get?

A. Well, based on 30 percent of windfall

profit tax --

Q. I'm familiar with that.

A. Yeah, I assume somewhere around $15.00, after the windfall profit tax.

Q. This is new oil, it would be more than that, wouldn't it?

A. That's right. Well, after the windfall profit tax is out of it, and the --

Q. Sounds low, but okay. You also allude, as Mr. Boyle did, to 80-acre spacing in the Peterson Field. I think if you'll check the records you'll find that the Peterson Field is 160 acres for a Penn well, and the reservoir characteristics are very similar to what you speak of.

The South Peterson Field is 80 acres per well, and I think that the Commission is probably going to have to do some soul-searching the next time an operator asks for 160 acres in the Peterson Field.

I agree with your request, as an ex-employee, that 80 acres per well is much better than 160 acres per well, and your computations, also, and I understand your permeability problem, because I went through this in the Peterson Field.

Now I could ask just one other question. Do you have any information on vertical and horizontal communication in those carbonates?

A. You mean within the Penn zone and other

zones in the --

Q You have perforated 7733 to 7763.

A Correct.

Q I don't know if you got all that alphabet soup or not. I've never heard of that before. But you know, there are stringers in that type of reservoir, and you may have perforated all that, I don't know. Okay, you did not. He's shaking his head no. All right. Do you know as yet whether or not you have horizontal and/or vertical communication, which would make some difference in your -- in your interpreting, and which you might do something else to the well later? I think Mr. Boyle can respond to that.

A Yes, I --

MR. BOYLE: May I answer that? Again, what was your name?

MR. BENESCHEK: I'm Beneschek.

MR. BOYLE: Beneschek.

MR. BENESCHEK: I own property in the area.

MR. BOYLE: Okay, Mr. Beneschek. As you know, having studied the Peterson Field, the Bough zones, you know, A, B, C, and so on, are usually separated by shales of 20 to 30 feet. To my knowledge, I don't think those are usually communicated. I think they're probably separate reservoirs, reservoir pods, and have probably leached out a ways.

We perforated off our logs, mainly in this zone at 70 -- I'd have to go back and look at the log, it would be 5 feet on that log, and then we perforated a couple -- couple of feet below; it is a gross interval of 30 feet, and we put 15 holes, out in --

MR. TAVAKOL: Yes sir, that's right.

MR. NUTTER: You've got 15 holes scattered through 30 feet, then, it's not 1 hole every 2 feet? All the way through?

MR. BOYLE: I don't think I -- where are those well logs?

MR. TAVAKOL: Let me check on that to be sure.

MR. BOYLE: I might, if I might continue, to add that our petrophysical analysis, done by Mr. Phil Henning (sic), they picked what they thought was all the porosity we could get off the logs, and we perforated those.

Go ahead.

MR. TAVAKOL: Would you like me to read the perforation intervals?

MR. NUTTER: I think that wouldn't hurt at all.

MR. TAVAKOL: Okay. 7733 to 7739; 7743 to 7745; 7754 to 7756; 7762 to 7763. And there's fifteen holes.

MR. BEHESCHEK: And you perforated some-

where within all of these sections that you think had pay?

MR. BOYLE: Yes, anything that showed porosity on the sonic and the density logs, which we, you know, and as I mentioned in Exhibit Five, I believe it was, the cross section, there was that one well in the Peterson Field that produces from the C and what we call E and F, and then another well that just produced from the C, and then there's other wells produce E and F, and we think, without going into a lot of geology and digenesis and leaching, and so on, that some zones are leached in one area and, as you know, in carbonates, in one location over they won't be leached, and unfortunately, that's kind of the history of the Bough. You get a good well; you can offset it and get a poor well, and vice versa. It just depends. Once you start drilling up the whole albamound (sic) complex, you're going to get good wells and you're going to get some bad wells, and I think historically we can -- we can demonstrate that by looking at all the field studies from the Roswell Geological Society from Beta Field, on Indio, South Indio, and Prairie, and Cisco, Bar-U, and so on, Lane, Mid-Lane, and South Lane (sic). It is a variable reservoir, unfortunately; it's not like a nice sand.

MR. BENDSCHEK: Thank you. Mr. Examiner, I don't have any other questions except to reiterate my comments. I'm glad to see this is on 80 acres, but I think the

point again should be made that when an operator requests 160 acres in Peterson Field, serious consideration should be given to study the reserves and recovery, et cetera.

MR. NUTTER: Of course, the Peterson Field is not the subject of this hearing today at all.

MR. BENESCHEK: I understand that, sir, but the reservoir characteristics are identical, according to this witness.

MR. TAVAKOL: Well, I guess you know, we did not ask for 160 acres. That's -- we're going for the minimum that we think is sufficient.

MR. BENESCHEK: I agree, as an engineer I agree.

MR. TAVAKOL: Thank you.

MR. BENESCHEK: I have no -- no qualms with that.

MR. TAVAKOL: Thank you.

MR. NUTTER: Okay, are there any other questions of Mr. Tavakol? He may be excused.

Do you have anything further, Mr. Owen Lopez?

MR. LOPEZ: No, Mr. Nutter, I surely don't.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 7023? We'll take the case under advisement.

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

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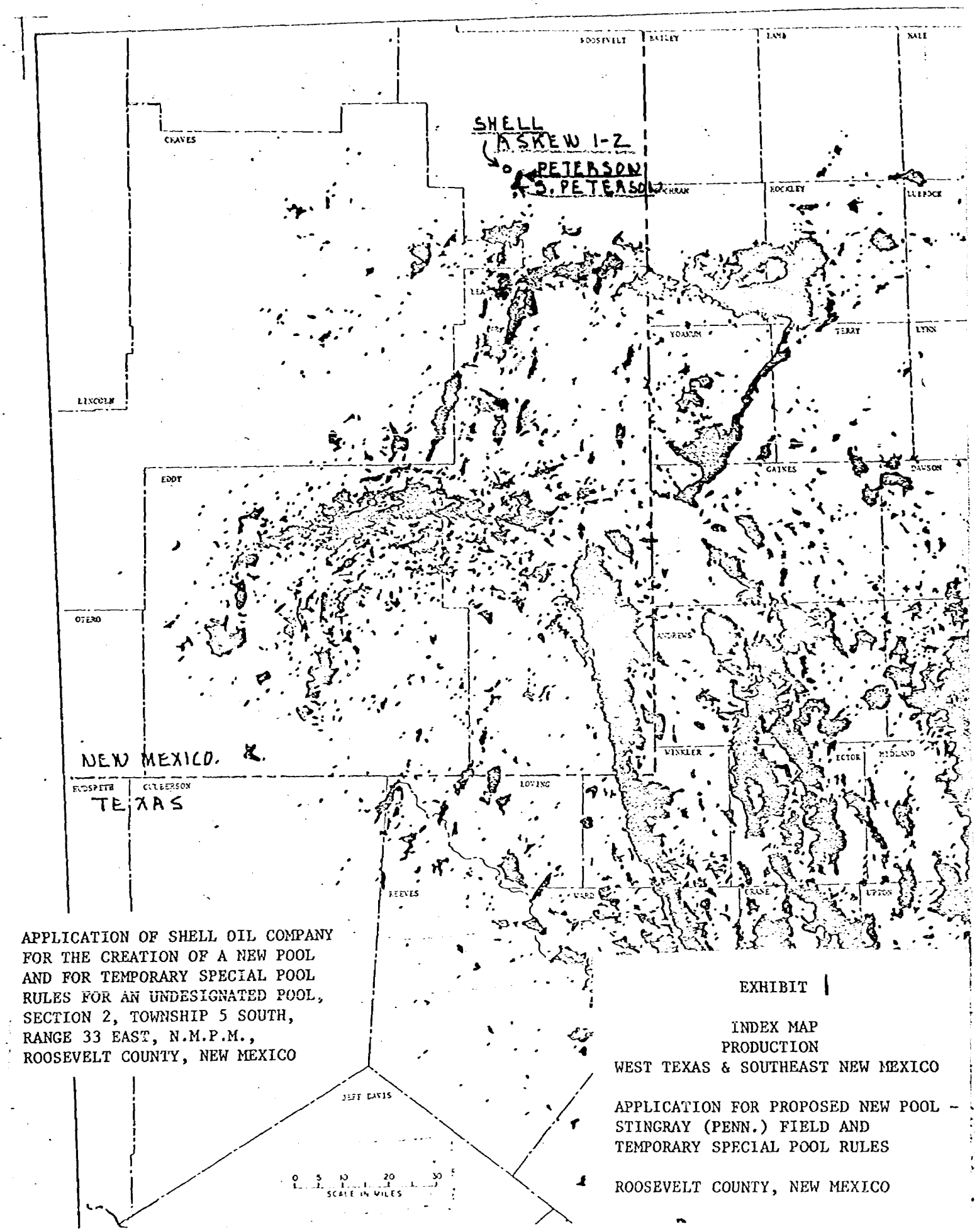
Phone (505) 455-7409

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7023 heard by me on 10/1 1980.

, Examiner
Oil Conservation Division



APPLICATION OF SHELL OIL COMPANY FOR THE CREATION OF A NEW POOL AND FOR TEMPORARY SPECIAL POOL RULES FOR AN UNDESIGNATED POOL, SECTION 2, TOWNSHIP 5 SOUTH, RANGE 33 EAST, N.M.P.M., ROOSEVELT COUNTY, NEW MEXICO

EXHIBIT 1

INDEX MAP
PRODUCTION
WEST TEXAS & SOUTHEAST NEW MEXICO

APPLICATION FOR PROPOSED NEW POOL - STINGRAY (PENN.) FIELD AND TEMPORARY SPECIAL POOL RULES

ROOSEVELT COUNTY, NEW MEXICO

Exhibit No. 9

AREA FIELDS HAVING 80 ACRE SPACING OR MORE

Field Name	Location	County	Spacing
Allison-Penn.	T-8 & 9-S, R-36 & 37-E	Lea & Roosevelt	80
Inbe - Penn.	T-10 & 11-S, R-33 & 34-E	Lea	80
Prairie Cisco	T-8-S, R-36-E	Roosevelt	80
Vada - Penn	T-8-S, R-34/36-E T-9-S, R-33/36-E T-10-S, R-33/34-E	Lea & Roosevelt	160

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
7 October 1981

EXAMINER HEARING

IN THE MATTER OF:

Case 7023 being reopened pursuant to the provisions of Order No. R-6489.

CASE 7023

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

MR. NUTTER: Call next Case 7023.

MR. PEARCE: In the matter of the Case 7023 being reopened pursuant to the provisions of Order R-6489, which order created the Stingray-Pennsylvanian Pool and promulgated special pool rules therefor, including the provision for 80 acre spacing.

MR. NUTTER: I've been advised by the parties, original parties in Case 7023 they will make no appearance today and that they wish the pool to revert to 40 acre spacing, which it will do.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7023 heard by me on 10/7 19 81

_____, Examiner
Oil Conservation Division

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
7 October 1981

EXAMINER HEARING

IN THE MATTER OF:

Case 7023 being reopened pursuant to the provisions of Order No. R-6489.

CASE 7023

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

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(Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7023 heard by me on 10/2 1981.

Examiner
Oil Conservation Division

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

October 16, 1981

Re: CASE NO. 7023
ORDER NO. R-6489-B

Mr. Owen Lopez
Montgomery and Andrews
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico 87501

Applicant:

OCD (Shell Oil Company)

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7023
Order No. R-6489-B

IN THE MATTER OF CASE 7023 BEING REOPENED PURSUANT TO THE PROVISIONS OF ORDER NO. R-6489, WHICH ORDER ESTABLISHED SPECIAL RULES AND REGULATIONS FOR THE STINGRAY-PENNSYLVANIAN POOL, ROOSEVELT COUNTY, NEW MEXICO, INCLUDING A PROVISION FOR 80-ACRE PRORATION UNITS.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on October 7, 1981, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 15th day of October, 1981, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That by Order No. R-6489 and R-6489-A, dated October 20, 1980, temporary Special Rules and Regulations were promulgated for the Stingray-Pennsylvanian Pool, Roosevelt County, New Mexico, establishing 80-acre spacing units for a period of one year.

(3) That pursuant to the provisions of Order No. R-6489, this case was reopened to allow the operators in the subject pool to appear and show cause why the Stingray-Pennsylvanian Pool should not be developed on 40-acre spacing units.

(4) That no operator in the subject pool appeared to show cause why the Stingray-Pennsylvanian Pool should not be developed on 40-acre spacing units.

(5) That it is not known at this time whether additional wells will be completed in the subject pool.

(6) That the operators in the subject pool have not established that one well can efficiently and economically drain and develop 80 acres.

(7) That the Special Rules and Regulations promulgated by Orders No. R-6489 and R-6489-A should be abolished.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the Stingray-Pennsylvanian Pool, Roosevelt County, New Mexico, promulgated by Order No. R-6489 and R-6489-A, are hereby abolished.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

Docket No. 31-81

Dockets Nos. 33-81 and 34-81 are tentatively set for October 21 and November 4, 1981. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - MONDAY - OCTOBER 5, 1981

OIL CONSERVATION COMMISSION - 9 A.M.
ROOM 205, STATE LAND OFFICE BUILDING,
SANTA FE, NEW MEXICO

CASE 7372: Application of Navajo Refining Company for a determination of preference to purchase state royalty oil pursuant to Section 19-10-68, NMSA, 1978.

****

Docket No. 32-81

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 7, 1981

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

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

CASE 7363: Application of Gulf Oil Corporation for a unit agreement, Chaves County, New Mexico.
Applicant, in the above-styled cause,seeks approval for the East White Ranch Unit Area, comprising 1920 acres, more or less, of Federal lands in Township 13 South, Range 30 East.

CASE 7364: Application of Gulf Oil Corporation for a unit agreement, Eddy County, New Mexico.
Applicant, in the above-styled cause, seeks approval for the East Chosa Draw Unit Area comprising 5120 acres, more or less, of Federal and State lands in Township 25 South, Range 25 East.

CASE 7365: Application of Yates Petroleum Corporation for the amendment of Order R-6406, Eddy County, New Mexico.
Applicant, in the above-styled cause, seeks the amendment of Order No. R-6406, to permit recompletion of its State "JM" No. 2 Well, drilled at an unorthodox Morrow location 660 feet from the South line and 660 feet from the East line of said Section 25, Township 18 South, Range 24 East, in any and all Wolfcamp and Pennsylvanian pays in said well.

CASE 7354: (Continued from the September 23, 1981, Examiner Hearing)

Application of Corona Oil Company, for a pilot steam-enhanced oil recovery project, Guadalupe County, New Mexico.
Applicant, in the above-styled cause, seeks authority to institute a pilot steam-enhanced oil recovery project in the Santa Rosa formation by using two existing wells and three additional wells to be drilled to complete a five spot pattern located in the NE/4 NW/4 of Section 17, Township 11 North, Range 26 East.

CASE 7359: (Continued from the September 23, 1981 Examiner Hearing)

Application of Energy Reserves Group for creation of a new gas pool and an unorthodox location, Roosevelt County, New Mexico.
Applicant, in the above-styled cause, seeks creation of a new Cisco gas pool for its Miller Com Well No. 1, located in Unit M of Section 12, Township 6 South, Range 33 East.

Applicant further seeks approval of an unorthodox location for its Miller "A" Well No. 1-Y, to be drilled 1300 feet from the South line and 1700 feet from the East line of Section 11 of the same township. The S/2 of said Section 11 to be dedicated to the well.

CASE 7366: Application of Read & Stevens, Inc., for compulsory pooling, Eddy County, New Mexico.
Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Strawn, Atoka and Morrow formations underlying the W/2 of Section 19, Township 23 South, Range 28 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7367: Application of Anadarko Production Company for compulsory pooling, Eddy County, New Mexico.
Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the N/2 of Section 12, Township 19 South, Range 25 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7368: Application of Doyle Hartman for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 1980 feet from the South line and 990 feet from the West line of Section 17, Township 24 South, Range 37 East, Jalmat Gas Pool, the S/2 of said Section 17 to be dedicated to the well.

CASE 7369: Application of Morris R. Antweil for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Blinebry and Drinkard formations underlying the NW/4 SE/4 of Section 8, Township 20 South, Range 38 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7370: Application of Southland Royalty Company for compulsory pooling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pictured Cliffs and Fruitland formations, East Blanco Field, underlying the NW/4 of Section 35, Township 30 North, Range 4 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7023: (Reopened and Readvertised)

In the matter of case 7023 being reopened pursuant to the provisions of Order No. R-6489, which order created the Stingray-Pennsylvanian Pool and promulgated special rules therefor, including provision for 80-acre spacing. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 7347: (Continued and Readvertised)

Application of Tenneco Oil Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox Pennsylvanian location of a well to be drilled 660 feet from the South line and 860 feet from the West line of Section 20, Township 16 South, Range 34 East, Kemnitz Fieid, the W/2 of said Section 20 to be dedicated to the well.

CASE 7371: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating, redesignating, extending vertical limits, and contracting and extending horizontal limits of certain pools in Chaves, Eddy, Lea, and Roosevelt Counties, New Mexico.

(a) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the Antelope Ridge-Wolfcamp Pool. The discovery well is Coquina Oil Corporation Alexander Well No. 1 located in Unit G of Section 10, Township 24 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM
Section 10: NE/4

(b) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Bone Spring production and designated as the Brinninstool-Bone Spring Pool. The discovery well is Amoco Production Company State IK Well No. 1 located in Unit C of Section 10, Township 23 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 33 EAST, NMPM
Section 10: NW/4

(c) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the Brinninstool-Wolfcamp Pool. The discovery well is Amoco Production Company Federal H Well No. 1 located in Unit L of Section 26, Township 23 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 33 EAST, NMPM
Section 26: SW/4

(d) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the Collins Ranch-Wolfcamp Gas Pool. The discovery well is the Yates Petroleum Corporation State DF Well No. 1 located in Unit D of Section 35, Township 17 South, Range 24 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 24 EAST, NMPM
Section 35: N/2

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

November 10, 1980

Re: CASE NO. 7023
ORDER NO. R-6489-A

Mr. Owen Lopez
Montgomery, Andrews & Hannahs
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico

Applicant:

Shell Oil Company

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD X
Artesia OCD X
Aztec OCD

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7023
Order No. R-6489

APPLICATION OF SHELL OIL COMPANY
FOR POOL CREATION AND SPECIAL POOL
RULES, ROOSEVELT COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on October 1, 1980, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 20th day of October, 1980, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That a new oil pool for Pennsylvanian production should be created and designated the Stingray-Pennsylvanian Pool. This pool was discovered by the Shell Oil Company Askew Well No. 1, located in Unit L, Section 2, Township 5 South, Range 32 East, NMPM, Roosevelt County, New Mexico. The top of the perforations is at 7733 feet.

(3) That Shell Oil Company seeks the promulgation of temporary special rules and regulations for the Stingray-Pennsylvanian Pool to provide for 80-acre proration units and well location requirements.

(4) That the evidence presented concerning the reservoir characteristics of the Stingray-Pennsylvanian Pool justifies the establishment of 80-acre proration units in said pool for a temporary one year period.

(5) That the evidence presently available establishes that the Stingray-Pennsylvanian Pool may be efficiently and economically drained on 80-acre proration units.

(6) That the evidence establishes that the subject pool should be developed with fixed well location requirements in order to protect correlative rights.

(7) That during the one-year period in which this order will be in effect, the applicant should gather all available information relative to drainage and recoverable reserves in the subject pool.

(8) That this case should be reopened at an examiner hearing in October, 1981, at which time the operators in the subject pool should appear and show by a preponderance of the evidence why the Stingray-Pennsylvanian Pool should not be developed on 40-acre proration units.

IT IS THEREFORE ORDERED:

(1) That a new pool in Roosevelt County, New Mexico, classified as an oil pool for Pennsylvanian production is hereby created and designated as the Stingray-Pennsylvanian Pool consisting of the following-described area:

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
Section 2: SW/4 Should be 32

(2) That special rules and regulations for the Stingray-Pennsylvanian Pool are hereby promulgated as follows, effective October 1, 1980.

SPECIAL RULES AND REGULATIONS
FOR THE
STINGRAY-PENNSYLVANIAN POOL

RULE 1. Each well completed or recompleted in the Stingray-Pennsylvanian Pool or in the Pennsylvanian formation within one mile of the Stingray-Pennsylvanian Pool, and not nearer to or within the limits of another designated Pennsylvanian pool shall be spaced, drilled, operated, and prorated in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or recompleted in the Stingray-Pennsylvanian Pool shall be located on a unit containing 80 acres, more or less, which consists of the N/2, S/2, E/2, or W/2 of a single governmental quarter section; provided, however, that nothing contained herein shall be construed as

prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. For good cause shown, the Director may grant an exception to the requirements of Rule 2 without notice and hearing when the application is for a non-standard unit comprising a single quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application if, after a period of 30 days, no offset operator has entered an objection to the formation of such non-standard unit.

The allowable assigned to any such non-standard unit shall bear the same ratio to a standard allowable in the Stingray-Pennsylvanian Pool as the acreage in such non-standard unit bears to 80 acres.

RULE 4. Each well drilled in the Stingray-Pennsylvanian Pool shall be located within 150 feet of the center of a governmental quarter-quarter section.

RULE 5. An 80-acre proration unit (79 through 81 acres) in the Stingrey-Pennsylvanian Pool shall be assigned an 80-acre depth bracket allowable of 267 barrels per day and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

(3) That this case shall be reopened at an examiner hearing in October, 1981, at which time the operators in the subject pool may appear and show cause why the Stingray-Pennsylvanian Pool should not be developed on 40-acre proration units.

(4) That any operator desiring to dedicate 80 acres to a well in the Stingray-Pennsylvanian Pool shall file a new Form C-102 with the Division on or before November 1, 1980.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY,
Director

S E A L

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

CASE NO. 7023
Order No. R-6489-A

APPLICATION OF SHELL OIL COMPANY FOR POOL CREATION AND SPECIAL POOL RULES, ROOSEVELT COUNTY, NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the Division that Order No. R-6489 dated October 20, 1980, does not correctly state the intended order of the Division,

IT IS THEREFORE ORDERED:

(1) That Order No. (1) on Page 2 of Order No. R-6489, Case No. 7023, be and the same is hereby corrected to read in its entirety as follows:

"(1) That a new pool in Roosevelt County, New Mexico, classified as an oil pool for Pennsylvanian production is hereby created and designated as the Stingray-Pennsylvanian Pool consisting of the following-described area:

TOWNSHIP 5 SOUTH, RANGE 32 EAST, NMPM
Section 2: SW/4"

(2) That the correction set forth in this order be effective nunc pro tunc as of October 20, 1980.

DONE at Santa Fe, New Mexico, on this 6th day of November, 1980.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S
Fd/

Exhibit No. 9

AREA FIELDS HAVING 80 ACRE SPACING OR MORE

Field Name	Location	County	Spacing
Allison-Penn.	T-8 & 9-S, R-36 & 37-E	Lea & Roosevelt	80
Inbe - Penn.	T-10 & 11-S, R-33 & 34-E	Lea	80
Prairie Cisco	T-8-S, R-36-E	Roosevelt	80
Vada - Penn	T-8-S, R-34/36-E T-9-S, R-33/36-E T-10-S, R-33/34-E	Lea & Roosevelt	160

EXHIBIT No. 8

DATA SHEET

SHELL ASKEW NO. 1-2

PHYSICAL PROPERTIES OF RESERVOIR ROCKS

Average Porosity (%) = 7 log analysis

Average Permeability (md) = 3 core analysis

Average oil and interstitial water saturations (%) = So 69
Sw 31

RESERVOIR FLUID CHARACTERISTICS

Average Gravity of Oil --- 44.4 API @ 60°

Average Gravity of Gas --- 1.0827 @ 60°

Formation Volume Factor --- 1.1

Viscosity of Oil (Centipoises) --- 0.758

API# 30-0- -20533

Exhibit No. 7

NO. OF COPIES RECEIVED		
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LAND OFFICE		
OPERATOR		

Form C-105
Revised 11-1-78

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease: State ☐ Fee ☒

5. State Oil & Gas Lease No.: NM 20533

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER

7. Unit Agreement Name:

8. Farm or Lease Name: Shell Askew

2. Name of Operator: Shell Oil Company

9. Well No.: 1

3. Address of Operator: P.O. Box 991, 237 T&C, Houston, TX 77001

10. Field and Pool, or Wildcat: Wildcat

4. Location of Well: UNIT LETTER L LOCATED 1980 FEET FROM THE south LINE AND 660 FEET FROM THE west LINE OF SEC. 2 TWP. 5S RGE. 32E NMPM

12. County: Roosevelt

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Cashinghead
4-9-80	5-25-80	7/25/80	4493.2' GR	

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By →	Rotary Tools	Cable Tools
8973'	8280' ✓			Rotary	

24. Producing Interval(s), of this completion — Top, Bottom, Name: 7733'-7763'

25. Was Directional Survey Made: No

26. Type Electric and Other Logs Run: MLL/ML, GNL/GR

27. Was Well Cored: Yes

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
20"	conductor	40'	24"	40 sx Redi Mix	0
13 3/8"	48#	412'	17 1/2"	550 sx Class C	0
8 5/8"	32#	3325'	12 1/4"	750 sx Class H,800sx Lite	0
5 1/2"	17,20,15.5,14	8330'	7 7/8"	1770 sx Class H	0

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 7/8"	7575	7575

31. Perforation Record (Interval, size and number)

7733'-7763' 15 holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
7733-7763	2000 gals 7% HCL 3000 gals 20% HCL

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping — Size and type pump)	Well Status (Prod. or Shut-in)
6/30/80	swabbing	shut-in

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas—Oil Ratio
6/30/80	8	--		25	TSTM	48	--

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity — API (Corr.)
0	0		75	TSTM	144	43.4° @60°F

34. Disposition of Gas (Sold, used for fuel, vented, etc.): No gas recorded

Test Witnessed By:

35. List of Attachments: Inclination Survey

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED A. J. Fore TITLE Senior Engr. Technician DATE 7-25-80

EXHIBIT 6

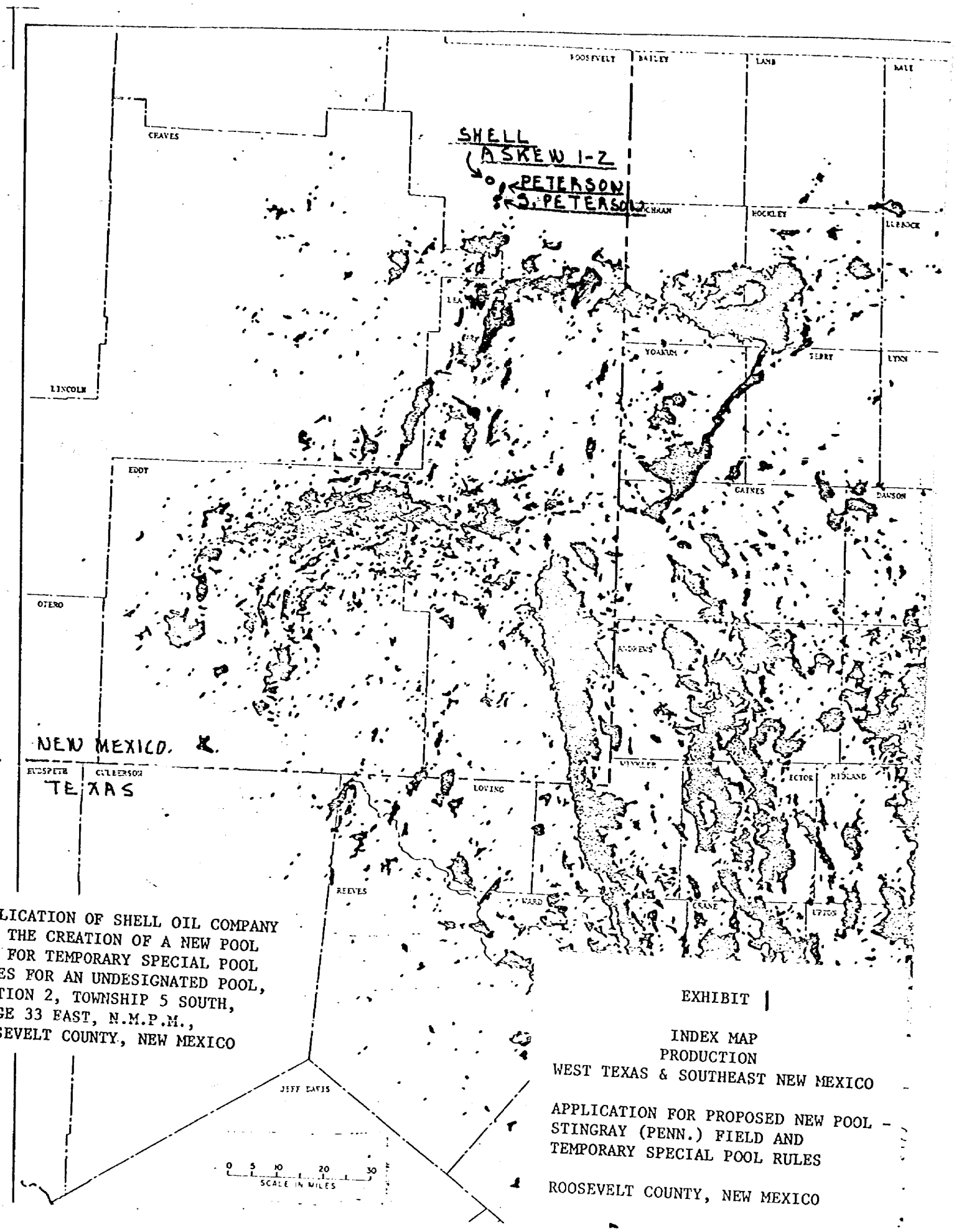
LAND MAP

APPLICATION FOR PROPOSED NEW POOL - STINGRAY (PENN.) FIELD AND TEMPORARY SPECIAL POOL RULES

ROOSEVELT COUNTY, NEW MEXICO

SCALE: 1 INCH = 4000 FEET

APPLICATION OF SHELL OIL COMPANY FOR THE CREATION OF A NEW POOL AND FOR TEMPORARY SPECIAL POOL RULES FOR AN UNDESIGNATED POOL, SECTION 2, TOWNSHIP 5 SOUTH, RANGE 33 EAST, N.M.P.M., ROOSEVELT COUNTY, NEW MEXICO



APPLICATION OF SHELL OIL COMPANY
FOR THE CREATION OF A NEW POOL
AND FOR TEMPORARY SPECIAL POOL
RULES FOR AN UNDESIGNATED POOL,
SECTION 2, TOWNSHIP 5 SOUTH,
RANGE 33 EAST, N.M.P.M.,
ROOSEVELT COUNTY, NEW MEXICO

EXHIBIT 1

INDEX MAP
PRODUCTION
WEST TEXAS & SOUTHEAST NEW MEXICO

APPLICATION FOR PROPOSED NEW POOL -
STINGRAY (PENN.) FIELD AND
TEMPORARY SPECIAL POOL RULES

ROOSEVELT COUNTY, NEW MEXICO

Exhibit No. 9

AREA FIELDS HAVING 80 ACRE SPACING OR MORE

Field Name	Location	County	Spacing
Allison-Penn.	T-8 & 9-S, R-36 & 37-E	Lea & Roosevelt	80
Inbe - Penn.	T-10 & 11-S, R-33 & 34-E	Lea	80
Prairie Cisco	T-8-S, R-36-E	Roosevelt	80
Vada - Penn	T-8-S, R-34/36-E	Lea & Roosevelt	160
	T-9-S, R-33/36-E		
	T-10-S, R-33/34-E		

EXHIBIT No. 8

DATA SHEET

SHELL ASKEW NO. 1-2

PHYSICAL PROPERTIES OF RESERVOIR ROCKS

Average Porosity (%) = 7% log analysis

Average Permeability (md) = 3 md core analysis

Average oil and interstitial water saturations (%) = So 69 %
Sw 31 %

RESERVOIR FLUID CHARACTERISTICS

Average Gravity of Oil --- 44.4 API @ 60°

Average Gravity of Gas --- 1.0827 @ 60°

Formation Volume Factor --- 1.1

Viscosity of Oil (Centipoises) --- 0.758

Volumetric recovery eff 12-20% of oil in place

based on nearby fields on 80 ac prod from same form
30% - 50% per yr ave = 40%

85 acres @ 15 bbls/day
rocks & fluids in this res similar

20 - 100,000

BEFORE EXAMINER HUTTER
OIL CONSERVATION
Shell EXHIBIT NO. 8
CASE NO. 7023

API# 30-0· -20533

Exhibit No. 7

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OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

Form C-105
Revised 11-1-58

5a. Indicate Type of Lease: State ☐ Fee ☒

5. State Oil & Gas Lease No.: NM 20533

7. Unit Agreement Name:

8. Farm or Lease Name: Shell Askew

9. Well No.: 1

10. Field and Pool, or Wildcat: Wildcat

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER

2. Name of Operator: Shell Oil Company

3. Address of Operator: P.O. Box 991, 237 T&C, Houston, TX 77001

4. Location of Well: UNIT LETTER L LOCATED 1980 FEET FROM THE south LINE AND 660 FEET FROM THE west LINE OF SEC. 2 TWP. 5S RGE. 32E NMPM

12. County: Roosevelt

15. Date Spudded: 4-9-80

16. Date T.D. Reached: 5-25-80

17. Date Compl. (Ready to Prod.): 7/25/80

18. Elevations (DF, RKB, RT, GR, etc.): 4493.2' GR

19. Elev. Cashinghead:

20. Total Depth: 8973'

21. Plug Back T.D.: 8280'

22. If Multiple Compl., How Many:

23. Intervals Drilled By: Rotary Tools: Rotary; Cable Tools:

25. Was Directional Survey Made: No

24. Producing Interval(s), of this completion — Top, Bottom, Name: 7733'-7763'

27. Was Well Cored: Yes

26. Type Electric and Other Logs Run: MLL/ML, GNL/GR

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
20"	conductor	40'	24"	40 sx Redi Mix	0
13 3/8"	48#	412'	17 1/2"	550 sx Class C	0
8 5/8"	32#	3325'	12 1/4"	750 sx Class H,800sx Lite	0
5 1/2"	17,20,15.5,14	8330'	7 7/8"	1770 sx Class H	0

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 7/8"	7575	7575

31. Perforation Record (Interval, size and number)

Current Rate 20-30 BOPD
25 BWPD

7733'-7763' 15 holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
7733-7763	2000 gals 7% HCL 3000 gals 20% HCL

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping — Size and type pump)	Well Status (Prod. or Shut-in)
6/30/80	swabbing	shut-in

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas—Oil Ratio
6/30/80	8	--	→	25	TSTM	48	--

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity — API (Corr.)
0	0	→	75	TSTM	144	43.4° @60°F

34. Disposition of Gas (Sold, used for fuel, vented, etc.): No gas recorded

Test Witnessed By:

35. List of Attachments: Inclination Survey

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED A. J. Fore TITLE Senior Engr. Technician DATE 7-25-80

EXHIBIT 6

LAND MAP

APPLICATION FOR PROPOSED NEW POOL - STINGRAY (PENN.) FIELD AND TEMPORARY SPECIAL POOL RULES

ROOSEVELT COUNTY, NEW MEXICO

SCALE: 1 INCH = 4000 FEET

APPLICATION OF SHELL OIL COMPANY FOR THE CREATION OF A NEW POOL AND FOR TEMPORARY SPECIAL POOL RULES FOR AN UNDESIGNATED POOL, SECTION 2, TOWNSHIP 5 SOUTH, RANGE 33 EAST, N.M.P.M., ROOSEVELT COUNTY, NEW MEXICO

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
1 October 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Shell Oil Company for pool creation and temporary special pool rules, Roosevelt County, New Mexico.

CASE 7023

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: Owen Lopez, Esq.
MONTGOMERY, ANDREWS
Paseo de Peralta
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. NUTTER: We'll call next Case Number 7023.

MR. PADILLA: Application of Shell Oil Company for pool creation and temporary pool rules, Roosevelt County, New Mexico.

MR. LOPEZ: Mr. Examiner, my name is Owen Lopez with the law firm of Montgomery and Andrews in Santa Fe, New Mexico, appearing on behalf of the applicant, and I have two witnesses to be sworn.

(Witnesses sworn.)

MR. NUTTER: Are there other appearances? Please proceed, Mr. Lopez.

WALT V. BOYLE

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. LOPEZ:

Q. Would you please state your name, by whom you're employed, and in what capacity?

A. Okay. My name is Walt Boyle.

MR. NUTTER: How do you spell that last

name?

A. B-O-Y-L-E, W. V., middle initial V. I am employed by Shell Oil Company in Houston, Texas. I have a degree from the University of Texas in geology, a B.S., and also a Masters degree.

I have worked in West Texas and New Mexico approximately fifteen years and I'm presently the supervisor for the New Mexico/West Texas area for Shell Oil Company.

Q. Have you previously testified before the Commission and had your qualifications accepted as a matter of record?

A. No, sir, I have never testified before New Mexico Commission.

Q. You have briefly described your employment background and educational background, as well. Are you familiar with the application of Shell in Case Number 7023?

A. Yes, sir, I am.

Q. And what is it that Shell proposes to seek in this case?

A. Shell seeks the creation of a new Pennsylvanian oil pool for its Shell Askew Well No. 1, located in Unit L of Section 2, Township 5 South, Range 33 East, Roosevelt County, New Mexico, and the promulgation of a special pool rules thereof -- therefor, including a provision for 80-acre spacing.

MR. LOPEZ: Are the witness qualifications acceptable?

MR. NUTTER: Yes, they are.

Q. Mr. Boyle, I would ask you to refer to what has been marked as Exhibit Number One and ask you to identify it.

A. Yes, sir. Mr. Examiner, Exhibit One is an index map of the oil and gas production in southeastern New Mexico and West Texas. The area, the Shell Askew No. 1-2, our discovery well, is shown in Roosevelt County. Just a little southeast of there is the Peterson Field, which produces from the Pennsylvanian-Wolfcamp-Alphabet formations. The areas in green down in the southern part of Roosevelt County, Lea, and Lea County, are also Pennsylvanian-Wolfcamp-Alphabet producing fields.

Q. Now I'd ask you to refer to Exhibit Number Two and describe it.

A. Mr. Examiner, Exhibit Number Two is a map at the scale of 1" equal 1000'. You'll notice in Section 2 of 5 South, 32 East, is the location of the Shell 1-2 Askew. To the southeast about three miles is Peterson Field, which is -- has at the present time seven wells producing from the Penn-Alphabet formation.

Also, in Section 14 is the Williams-Tucker Well, which is a dry hole, and in Section 16 of 5, 32,

is the Phillips-Silas, which is also a dry hole. Both of those tested the Alphabet formation, Penn-Alphabet, and found it to be noncommercial.

So this is, in summary, just a large scale map showing all of the wells that have been drilled in this area.

Q. Now referring to Exhibit Number Three, would you please describe that?

A. Mr. Examiner, Exhibit Three is a copy of the borehole compensated sonic gamma ray log run on our Shell Askew No. 1-2, Section 2, 5 South, 32 East. It has, as you can see, the appropriate tops marked on the log, the drill depths and the subsea depths. These are the tops that are used in the industry in this area, and if you will note, at a depth of 7610 is what we've designated the Wolfcamp-Penn-Alphabet section, and then our producing interval in the -- in the Penn-Alphabet perforated from 7733 to 7763.

MR. NUTTER: Mr. Boyle, I'm not familiar with this so-called Penn-Alphabet series. What are you referring to there?

A. This is a term that at least Shell uses and quite a few of the companies that operate in this area. Sometimes it's just -- you just -- it is referred to as the Penn formation. It originally goes back many years to the Bough formations, the Bough A, B, and C.

MR. NUTTER: Okay, that's what I was wondering.

A. Yes, sir.

MR. NUTTER: Are you definitely out of the Wolfcamp?

A. Well, sir, to be technically, to answer that technically, Shell, by fusilinid it's the Bough A and the B zones. We, by fusilinid would say that's Wolfcamp, but the top of the Bough C, that's Penn. The industry just usually says that's Penn.

MR. NUTTER: Okay, now what would your perforations be in here?

A. Our perforations would be in the Penn and we think, as close as we can correlate, that these would probably be what we designate Alphabet E and F, but I purposely left them off because the correlations are kind of --

MR. NUTTER: But it is definitely below the C.

A. It is definitely below the C zone, yes.

MR. NUTTER: So there's no question here, this is Pennsylvanian rather than --

A. Yes, sir.

MR. NUTTER: -- the Wolfcamp pay?

A. Yes, sir, that is correct, yes, sir.

MR. NUTTER: Just wanted to clear that

point.

A. Yes, sir, good point, yes, sir. I know all the companies have, you know, sometimes a little bit different twist on how they -- how they call some of these zones.

MR. NUTTER: Sometimes if we can't solve it any other way, we just call it Permo-Penn.

A. Permo-Penn, if you wish to do that, that's fine.

MR. NUTTER: No, you said you're definitely in the Penn.

A. Yes, that's correct, by fusilinids, yes, sir. By fusilinid examination these have been designated Pennsylvanian.

Q. Now referring to Exhibit Four, would you please describe this exhibit?

A. Yes, sir. Exhibit Four is a structure map at a scale of 1" equal 4000', covering the area around the Shell Askew No. 1 discovery in Roosevelt County. If you will look over on the right side of the map, this is the, what we call the type log. It is a log, again, the gamma ray sonic log, of the Shell Askew, again, the top of our Alphabet series is at 7610. Our perforations, our Penn perforations at 7733 to 7763. This map is drawn on, again, Shell terminology, what we call Permian "OM" zone, designated on the log at 7268. The reason we use this is we feel that this is a

good correlative structural marker; it's a time marker. It's about 300 feet above the Alphabet, but that is the -- that is the structural marker that the map is prepared on.

If you will look in Section 2 of 5, 32, again the Shell Askew, you will see the top of the "OM" there is at a -2762. The dry hole I had referred to earlier, the Williams-Tucker in Section 14 in 5, 32, is at 2943, and if we go to Peterson Field, which encompasses Sections 8, 17, 18, 19, and 20, in 5, 33, these are the -- this is the Peterson Field and it's so designated -- the structural elevations there are -- range from -2830 to -2841.

The point I want to make on this, Mr. Examiner, is that there is a structural low or separation between the Shell Askew in Section 2, 5, 32, and the Peterson Field, Penn field, located in Sections 17, 18, 19, and 20, 5, 33.

Structurally from the -- about the lowest point of 2950 to -- to the Shell Askew, there's about 100 -- you have to come up structurally about 188 feet, and then if you take from, again, the 2950 contour up to one of the lower wells in Peterson Field, for example, Well NO. 1, the Amoco Radcliffe, in the southwest of the southwest of 17, you come up some 110 feet. So again to reiterate, what this -- what we wanted to show on this map is that there is a structural separation between the Shell Askew and the Peterson Field,

and we feel that those are two separate reservoirs.

Q. This exhibit also shows, does it not, that there are no other producing wells within the vicinity of the Shell Askew Well?

A. Yes, that is correct; that's true.

Q. Okay. Now referring to Exhibit Number Five, would you please describe it?

A. Exhibit Number Five is more or less a north/south structural cross section hung on a datum of -3000 feet. Again, if you will refer to the index map in the right side of the cross section, the map is on a scale of 1" equal 8000'. It goes from Well No. 1, located in Tanneyhill Field, through South Peterson Field, which is productive from the Penn-Alphabet, and from the Pre-Mississippian, or I think as it's designated, Fusselman, up into Peterson Field, northward into Peterson Fields, which is mainly productive from the -- from the Penn-Alphabet, to Well No. 11, which is the Shell Askew.

And what we want to demonstrate on this section is that if you will observe, say, Peterson Field, from Well 6 to Well 8, it is on a structural high, and then you can see the sag that I referred to in Exhibit Four, say, take for example, the top of the Penn-Alphabet, you can see the structural sag goes down and then comes back up to our Shell Askew No. 1-2, our proposed Stingray Field, and again, this

just is prepared to -- to show that there is in fact a structural sag between Peterson and the Shell Askew 1-2.

The Pennsylvanian production seems to be productive from, say, from the C zone clear on down into E and F zone, if you'll look at Well No. 7, it's productive; appears they have perforated that interval. In Well No. 6 it looks like it's productive in the E and F zones and -- yeah, okay, I'll just stop right there.

So the production does vary from zone to zone.

Q. Now referring to Exhibit Number Six, would you please describe that?

A. Exhibit Number Six is simply a land plat in Roosevelt County, New Mexico, at a scale of 1" equal 4000. It simply shows the location of the Shell Askew No. 1-2 some 660 feet from the west line and 1980 from the south line in Section 2 of 5, 32, and also, if you drop about three miles to the southeast, in green is the Peterson Field.

Q. On what spacing has the Peterson Field been developed?

A. Presently the Peterson Field is -- appears to be developed on 80-acre locations.

Q. And in your opinion the production is from the same zone as the Shell Askew No. 2? Or No. 1?

A. Yes, sir, there are zones in Peterson

Field which are also productive from the same zone in our Shell Askew 1-2.

Q. All right. Were Exhibits One through Six prepared by you or under your supervision?

A. They were prepared under my supervision and by me, also, a combination.

MR. LOPEZ: Mr. Examiner, I'd offer Shell's Exhibits One through Six.

MR. NUTTER: Applicant's Exhibits One through Six will be admitted in evidence.

MR. LOPEZ: I have nothing further for this witness.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Boyle, I think you made a good case for creation of a new pool, but I haven't seen anything yet to justify the 80-acre spacing.

MR. LOPEZ: That's the second witness, Mr. Examiner.

A. We have a --

MR. NUTTER: Okay. We'll let Mr. Boyle go, then. He's got the evidence for the new pool.

MR. BENESCHEK: Mr. Examiner, is it time now for me to ask a question of the witness?

MR. NUTTER: Yes, sir, if you want to ask a question.

MR. BENESCHEK: Yes, sir, I'd like to, if I could.

QUESTIONS BY MR. BENESCHEK:

Q. I'm H. W. Beneschek, royalty and mineral owner in the area, formerly with Shell Oil Company, formerly a Chairman of the School of Petroleum Engineering, University of Oklahoma.

Would you mind telling me what the porosity, permeability, and initial production is on the Askew Well?

MR. LOPEZ: It will be answered.

MR. BENESCHEK: Oh, that's coming up?

A. Yes, sir, that's --

MR. LOPEZ: With the next witness.

MR. BENESCHEK: That will be with the next witness?

A. Yes, sir, it is. Mr. Tabakol is a reservoir engineer and the way we set this up is for me to present the --

Q. Okay.

A. -- geology and then he'll talk about the reservoir.

Q. Okay, then I have another question, which you did allude to, or comment, Mr. Examiner, if it's all right. You made a statement that the, Mr. Boyle did, that the Peterson Field is on 80-acre locations. I am under a well, Penn well in the Peterson Field, that's on 160 acres. I concur with 80 acres, or preferably 40 acres, as called out in the rules of the Commission, but I am under 160 acres in the Peterson Field under a Penn well.

I just wanted to point that out --

A. Okay.

Q. -- but you said 80 acres.

A. Yes, I was under the impression that most of the fields down there are under 80 acres. Now, I could be wrong on that.

Q. I think it's South Peterson.

A. So Peterson is under 80?

Q. 160.

A. I mean 160, yes, 160?

Q. I am under 160 myself.

A. Okay.

Q. I know, I'm losing half my income.

A. Okay. Okay.

MR. BENESCHEK: That's all I have, Mr. Examiner, from this witness.

MR. NUTTER: Are there any questions for

Mr. Boyle? He may be excused.

A. Okay, thank you.

MIKE TAVAKOL

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. LOPEZ:

Q. Would you please state your name?

A. Mr. Examiner, my name is Mike Tavakol. I'm working for Shell Oil Company.

MR. NUTTER: Would you spell your name, please?

A. T-A-V-A-K-O-L. Mike Tavakol.

Q. In what capacity are you employed by Shell?

A. Reservoir engineer.

Q. Have you previously testified before the Commission and had your qualifications accepted?

A. No, sir.

Q. Would you therefor briefly describe your educational background and employment experience?

A. Yes. I have a BS in petroleum engineering from Louisiana State University. I also have a BS in chemical

engineering from Louisiana State University, and I've been working for Shell for 2-1/2 years and currently I'm pursuing a Masters degree in petroleum engineering.

Q. When did you graduate from Louisiana State University?

A. May, '78.

Q. And you've been working with Shell since that time?

A. That's correct.

Q. And is the area which is the subject of this application part of your responsibilities?

A. That's right.

MR. LOPEZ: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are. You're stationed in Houston, are you?

A. Yes.

MR. NUTTER: Okay, he's qualified.

Q. Mr. Tavakol, I'd ask you to refer to what has been marked Shell's Exhibit Number Seven and ask you to explain that.

A. Okay, that's New Mexico Oil Conservation Commission Form C-105, which shows a completion record, as you see. It shows the location of the well, being 980 feet from the south line and 660 feet from the west, Section 2,

5 South and 32 East.

It also shows that the well was completed in July 25, 1980. It shows the completion interval being from 7733 feet to 7763 feet. It shows the logs that we obtained. It also shows the casing record and cement, the tubing, which is 2-7/8ths inch. It also shows the stimulation that we -- the stimulation that we undertook for this well, being 5000 gallons of acid. On June 30th we had a swab test which showed a rate of 25 barrels of oil per day with 48 barrels of water per day, this being in eight hours. Taking it in 24 hours, it would be 75 barrels of oil per day and 144 barrels of water per day; however, we acquired current -- newer tests and right now it seems like the oil production would fluctuate anywhere from 20 to 30 barrels of oil per day and the water being around 25 barrels of water per day.

Any question?

Q. Now if you'd refer to Exhibit Number Eight and I'd ask you to explain that.

A. Okay. This shows limited data that we have been able to obtain so far. It shows the physical properties of the reservoir rocks. By log analysis we were able to obtain 7 percent porosity and by core analysis we were able to obtain permeability of 3 millidarcies. By log analysis we were able to obtain recovery -- the well saturation of 31 percent. Reservoir fluid characteristics show that we have

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gravity, oil gravity of 44.4 API at 60° F; the gas gravity at the same temperature is 1.0827. The formation volume factor is estimated at 1.1 reservoir barrel per standard tank barrel. The viscosity of oil is .758 centipoise, and that's all we have been able to get so far.

I should emphasize that this data are very similar to the surrounding area in the same reservoir, being South Peterson and Peterson Penn and they are reasonably close, so we're confident that they are correct properties for the rocks and the fluids.

Q. Now I'd ask you to refer to Exhibit Number Nine and describe that.

A. Okay. This shows that other pools in the area completed in the same -- in the Pennsylvanian formation that have been granted 80-acre spacing and more, which is 160 acres for Vada-Penn.

Q. And for what reason have you requested the special pool rules? What is the basis for your request for the special pool rules?

A. Okay. Number one, our reservoir study, based on volumetric calculation and production performance of other Pennsylvanian pools in the area, has revealed that the reservoir will be drained efficiently with 80-acre spacing.

Number two, economic analysis has shown that the effective use of a minimum number of wells is essen-

tial to the economic depletion of the reservoir and development cannot be justified on less than 80-acre spacing.

Also, as I mentioned earlier, other pools in the area have been granted 80-acre spacing and more.

Q. And these other pools have production from the same zone?

A. That's correct.

Q. In your opinion, Mr. Tavakol, would the granting of this application be in the interest of prevention of waste and the protection of correlative rights?

A. That's right, sir.

Q. Were Exhibits Seven through Nine prepared by you or under your direction?

A. They were prepared by me.

MR. LOPEZ: I have I would offer Shell's Exhibits Seven through Nine.

MR. NUTTER: Applicant's Exhibits One through -- Seven through Nine will be admitted in evidence.

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

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Tavakol, you stated you believe that one well would drain 80 acres. Isn't this permeability, being

only 3 millidarcies rather low for --

A. No, sir, other reservoirs, I mean as I mentioned, it is very close to other pools in the area, and I have studied other wells as much as I could, and they have shown that 80 acres will be drained by -- by one well.

Q. You don't have any evidence as to what the permeability is in any of these other reservoirs here.

A. No, I guess I haven't shown the permeability for the reservoirs.

MR. LOPEZ: If we could go off the record for a second.

A. We do have an exhibit that shows the porosity and net pay and the water saturation but not the permeability.

Q. Of this reservoir?

A. On other pools, yeah.

(There followed a discussion off the record.)

MR. NUTTER: We'll go back on the record, Owen, and you can ask him about that.

A. The reserves --

Q. Okay, could you provide the Commission with additional evidence and testimony as to the basis on which

you base your belief that the temporary pool rules are necessary and that 80-acre spacing will efficiently and effectively drain -- one well on an 80-acre proration unit will efficiently and effectively drain that proration unit?

A. Okay. Based on volumetric and investigation on recovery efficiency for this area, I have -- I was able to estimate recovery efficiency on the range of 12 to 20 percent of oil in place, and by studying the performance of other wells in the area, I established that the decline rate for the zone renders anywhere from 30 percent to 50 percent per year, average being 40 percent per year.

By simultaneous calculation of volumetric and decline rate amounts, I was able to obtain a drainage area of 85 acres, assuming 15 barrels of oil per day, which is current production that we have.

Q. These calculations of other wells in the area, these wells that you studied were wells producing from the same formation in other pools.

A. Yes.

Q. And in these studies did you compare the relative permeabilities and porosities and water saturations of these other wells, and if so, what was your conclusion?

A. My conclusion was that the rocks and the fluids were very similar and they should have a similar performance, therefor.

Q. (By Mr. Nutter) Have you made any rough estimate of the reserves in place --

A. Yes.

Q. -- under 80 acres as opposed to 40 acres here?

A. Yes. Well, for 80 acres the range would be 20,000 to 100,000 barrels -- from 20,000 to 100,000 barrels, the range.

Q. That's on --

A. The recovery.

Q. -- an 80-acre tract or --

A. 80-acre tract, uh-huh.

Q. Now you calculated that a well would drain 85 acres.

A. Well, that was -- I round it off to 80 acres because -- as uncertainty for the calculations, but 85 acres was the number that theoretically I got, and --

Q. Well, that's quite a range of -- of -- now 20 to 100,000, is that recoverable reserves or oil in place?

A. Recoverable reserves. As I mentioned, the recovery efficiency was -- I had to vary the recovery efficiency, and since we do not have any fluid, actual fluid data, I should mention volumetric, for example, we do not have any fluid sample at this time, so the formation volume factor is

estimate and also is the viscosity fluid, and those have a very big factor in estimating recovery efficiency and the volumetric.

Q. Well, your -- your estimate of recovery efficiency is from 12 to 20 percent, which is a variation of less than 2, but your estimate of reserves is from 20 to 100,000 barrels, which is a factor of 5.

A. Yes, sir, that was because we have had production rates of anywhere from 15 to 75 barrels of oil per day.

Q. Uh-huh.

A. So here again, at this time I did not know what would be the production so I had to make a range of production from 15 to 75.

Q. Well, didn't you state that the current production is running between 20 and 30 barrels per day.

A. That's correct, but this is not the stabilized rate yet, so we -- we might have --

Q. How long has the well been on production?

A. To the best of my knowledge, it's been a month, but it's been fluctuating, as I mentioned, from 75 to 15, and we might do some stimulation on the well, which could raise the production to again, 70 -- and again, other wells in the area have shown sometimes 200,000 barrels of oil per day. I'm sorry, 200 barrels of oil per day.

Q. Uh-huh.

A. So we might have by stimulation, it might increase the production rate, but this is too early to say. That's why I say, I could not give a specific number. It just depends on what would be the fluid properties and what would be the production rate that we might end up with.

Q. Uh-huh.

A. And also there is another thing, we haven't been able to get any gas from the reservoir, which we suspect some kind of possible damage in the zone, and as you know yourself, it's probably lower -- the low permeability, which we might increase. So in that case, if we get gas production up, we might get a better production rate.

Q. Well, you stimulated with 5000 gallons of acid but you've got 30 feet of perforations there.

A. And the perforations are 30 feet, but the net pay we estimated would be about 4 feet, that's --

MR. BOYLE: 4 to 5.

A. 4 to 5 feet, and that's another factor that I feel confident that we might get area drained because of the limited reservoir limits.

Q. Well, it appears your water/oil ratio is going down, however, isn't it?

A. That's -- that's right. That's what we have seen.

Q. But the gas production has not gone up at all.

A. Well, at one time -- first it was too small to measure, but then it went to 10 Mcf per day and one time 20, but then it went down again, so we were trying to -- I did -- we did try to get a fluid sample and since we have water production we could not get a downhole sample, and then we tried to get the surface sample, but we did not have a GOR accurately measured, so we could not get a fluid sample, and that's the reason that our data is limited, and we try to wait until we get a good GOR and possibly get a fluid sample through a combination of the surface materials.

Q. Well now, --

A. But I should mention again that economics also showed that we won't be able to really develop on this field on 40-acre spacing unless we have some higher production rates so we could payout our expenses.

Q. Do you know whether Shell has any plans for drilling a second well in here or not?

A. We are thinking of this.

Q. But you haven't made any definite commitment to a second well?

A. We're trying to wait to see exactly what happens to this well. Once we get good data and reasonably estimated reserve and payout, but the difference, and this I

noted, 40-acre is out of the picture because it won't pay for the expenses, but 80-acre, we feel confident that it would pay out, but we are waiting for more data and we are waiting for better production rate.

Q. Is this well flowing or pumping?

A. It's pumping.

Q. What did the well cost to drill and to complete, including pumping unit?

A. Close to $1-million.

Q. Now, on this Exhibit Number Six, I notice that the well is drilled on a lease that's called the C. W. Williams, Jr. lease. Does Shell own that lease now?

A. We farm that unit.

MR. LOPEZ: We might refer to Mr. Boyle to answer that question.

MR. NUTTER: Mr. Boyle?

MR. BOYLE: Yes, sir, this was the lease that -- we had an anomaly in this area, and part of the anomaly was on Clayton Williams' acreage, and so we went to Mr. Williams and negotiated a contract with him to farm that acreage in, and in the farmout we got a -- we gave him -- he has an eighth until the well is paid out and then he has an option to come in for a 41 percent working interest, and we have a 59 percent working interest.

MR. NUTTER: Well, it would appear from

Exhibit Six that the Williams lease --

MR. BOYLE: That is part that we -- that is part of our acreage that we got a farmout from Williams. We farmed out Section 2 and Section 3.

MR. NUTTER: So you've got a farmout there covering --

MR. BOYLE: Yes.

MR. NUTTER: -- two full sections.

MR. BOYLE: Two full sections, correct.

MR. NUTTER: And you also have some acreage to the north there.

MR. BOYLE: And we have acreage in there, so that is -- that is the reason that -- and we do have, we have plans to drill either in Section 2 -- or in Section 3 or the west -- or the east half of 2. Both of those are separate leases.

I might also add that in -- with what Mr. Tavakol mentioned, that he is correct, at this time it is rather early to try to estimate volumes. I think from -- he has -- he has some data which we could offer as an exhibit, but if you go down to Lea County and Chaves County, there's just -- just by analogy, there are wells that produce out of the Bough that are anywhere from 4 feet to 8 feet of pay, and 7 to 8 percent is the average porosity, and water saturation is from 30 to 35. We do have data to back that up, and so

based on that sort of empirical data of 30 to 35 percent water saturation, of porosity of 7 to 8, and pay ranging from anywhere, some of them 3 feet to 8 feet, 10 feet, we thought that at least initially we would ask for 80 acres.

MR. NUTTER: Okay, now you covered all of the reservoir factors with the exception of permeability. How does this permeability compare with those reservoirs?

MR. BOYLE: I -- I don't know.

A. It is -- I tried -- I tried to obtain this data. The data is very limited.

MR. BOYLE: It's pretty hard to do.

A. I really -- it was hard. I tried the Commission to get some public data and I could not get any permeability.

So -- but I just feel since everything else is similar, so permeability should be similar, too. We have the same porosity, same water saturation.

MR. NUTTER: Same thickness of pay.

MR. BOYLE: Those -- those are figures that you can figure off of the sonic or gamma ray or density logs, even though that other data, most of the time, isn't available, so the permeability, at least, so that's what we're basing this on.

MR. LOPEZ: I might ask Mr. Boyle, your plans or intentions to drill a second well on this farmed out

acreage, as well as your own acreage, is dependent upon the success of this application in large part, is it not?

MR. BOYLE: That is, yes, that is somewhat correct, yes, sir. We have a -- if I may speak again -- we have an agreement with Mr. Williams that this is on a drill to earn basis, and with 120 days between wells, and this well was -- was filed with the Commission on June 25th, 1980, but subsequent to that we went up and tested the San Andres and spent about three to four weeks, almost a month, testing the San Andres. It proved to be water-bearing, so they dropped back down and started pumping again, the -- pumping the San Andres -- pumping the Penn, and we did have some pump problems.

MR. NUTTER: Thank you. Are there any further questions of Mr. Tavakol?

MR. BENESCHEK: Mr. Examiner, I have a question.

MR. NUTTER: All right, sir.

QUESTIONS BY MR. BENESCHEK:

Q. I don't recall that you asked the price of oil; you can't very well know the economics unless you know the price of oil that you're going to get down there.

A. What -- what is the price of oil?

Q. Yes, what are you going to get?

A. Well, based on 30 percent of windfall

profit tax --

Q. I'm familiar with that.

A. Yeah, I assume somewhere around $15.00, after the windfall profit tax.

Q. This is new oil, it would be more than that, wouldn't it?

A. That's right. Well, after the windfall profit tax is out of it, and the --

Q. Sounds low, but okay. You also allude, as Mr. Boyle did, to 80-acre spacing in the Peterson Field. I think if you'll check the records you'll find that the Peterson Field is 160 acres for a Penn well, and the reservoir characteristics are very similar to what you speak of.

The South Peterson Field is 80 acres per well, and I think that the Commission is probably going to have to do some soul-searching the next time an operator asks for 160 acres in the Peterson Field.

I agree with your request, as an ex-employee, that 80 acres per well is much better than 160 acres per well, and your computations, also, and I understand your permeability problem, because I went through this in the Peterson Field.

Now I could ask just one other question. Do you have any information on vertical and horizontal communication in those carbonates?

A. You mean within the Penn zone and other

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zones in the --

Q. You have perforated 7733 to 7763.

A. Correct.

Q. I don't know if you got all that alphabet soup or not. I've never heard of that before. But you know, there are stringers in that type of reservoir, and you may have perforated all that, I don't know. Okay, you did not. He's shaking his head no. All right. Do you know as yet whether or not you have horizontal and/or vertical communication, which would make some difference in your -- in your interpreting, and which you might do something else to the well later? I think Mr. Boyle can respond to that.

A. Yes, I --

MR. BOYLE: May I answer that? Again, what was your name?

MR. BENESCHEK: I'm Beneschek.

MR. BOYLE: Beneschek.

MR, BENESCHEK: I own property in the area.

MR. BOYLE: Okay, Mr. Beneschek. As you know, having studied the Peterson Field, the Bough zones, you know, A, B, C, and so on, are usually separated by shales of 20 to 30 feet. To my knowledge, I don't think those are usually communicated. I think they're probably separate reservoirs, reservoir pods, and have probably leached out a ways.

We perforated off our logs, mainly in this zone at 70 -- I'd have to go back and look at the log, it would be 5 feet on that log, and then we perforated a couple -- couple of feet below; it is a gross interval of 30 feet, and we put 15 holes, out in --

MR. TAVAKOL: Yes sir, that's right.

MR. NUTTER: You've got 15 holes scattered through 30 feet, then, it's not 1 hole every 2 feet? All the way through?

MR. BOYLE: I don't think I -- where are those well logs?

MR. TAVAKOL: Let me check on that to be sure.

MR. BOYLE: I might, if I might continue to add that our petrophysical analysis, done by Mr. Phil Henning (sic), they picked what they thought was all the porosity we could get off the logs, and we perforated those.

Go ahead.

MR. TAVAKOL: Would you like me to read the perforation intervals?

MR. NUTTER: I think that wouldn't hurt at all.

MR. TAVAKOL: Okay. 7733 to 7739; 7743 to 7745; 7754 to 7756; 7762 to 7763. And there's fifteen holes.

MR. BENESCHEK: And you perforated some-

where within all of these sections that you think had pay?

MR. BOYLE: Yes, anything that showed porosity on the sonic and the density logs, which we, you know, and as I mentioned in Exhibit Five, I believe it was, the cross section, there was that one well in the Peterson Field that produces from the C and what we call E and F, and then another well that just produced from the C, and then there's other wells produce E and F, and we think, without going into a lot of geology and digenesis and leaching, and so on, that some zones are leached in one area and, as you know, in carbonates, in one location over they won't be leached, and unfortunately, that's kind of the history of the Bough. You get a good well; you can offset it and get a poor well, and vice versa. It just depends. Once you start drilling up the whole albamound (sic) complex, you're going to get good wells and you're going to get some bad wells, and I think historically we can -- we can demonstrate that by looking at all the field studies from the Roswell Geological Society from Beta Field, on Indio, South Indio, and Prairie, and Cisco, Bar-U, and so on, Lane, Mid-Lane, and South Lane (sic). It is a variable reservoir, unfortunately; it's not like a nice sand.

MR. BENESCHEK: Thank you. Mr. Examiner, I don't have any other questions except to reiterate my comments. I'm glad to see this is on 80 acres, but I think the

point again should be made that when an operator requests 160 acres in Peterson Field, serious consideration should be given to study the reserves and recovery, et cetera.

MR. NUTTER: Of course, the Peterson Field is not the subject of this hearing today at all.

MR. BENESCHEK: I understand that, sir, but the reservoir characteristics are identical, according to this witness.

MR. TAVAKOL: Well, I guess you know, we did not ask for 160 acres. That's -- we're going for the minimum that we think is sufficient.

MR. BENESCHEK: I agree, as an engineer I agree.

MR. TAVAKOL: Thank you.

MR. BENESCHEK: I have no -- no qualms with that.

MR. TAVAKOL: Thank you.

MR. NUTTER: Okay, are there any other questions of Mr. Tavakol? He may be excused.

Do you have anything further, Mr. Owen Lopez?

MR. LOPEZ: No, Mr. Nutter, I surely don't.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 7023? We'll take the case under advisement.

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7023, heard by me on 10-1 1980.

, Examiner
Oil Conservation Division

ROUGH

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7023

Order No. R-6489-B

IN THE MATTER OF CASE 7023 BEING REOPENED PURSUANT TO THE PROVISIONS OF ORDER NO. R-6489, WHICH ORDER ESTABLISHED SPECIAL RULES AND REGULATIONS FOR THE STINGRAY-PENNSYLVANIAN POOL, ROOSEVELT COUNTY, NEW MEXICO, INCLUDING A PROVISION FOR 80-ACRE PRORATION UNITS.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on October 7 19 81, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of October, 19 81, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That by Order No. R-6489 and R-6489-A, dated ~~January~~ October 20, 1980, temporary Special Rules and Regulations were promulgated for the Stingray-Pennsylvanian Pool, Roosevelt County, New Mexico, establishing 80-acre spacing units for a period of one year.

(3) That pursuant to the provisions of Order No. R-6489, ~~and R-6489-A,~~ this case was reopened to allow the operators in the subject pool to appear and show cause why the Stingray-Pennsylvanian Pool should not be developed on 40-acre spacing units.

(4) That no operator in the subject pool appeared to show cause why the Stingray-Pennsylvanian Pool should not be developed on 40-acre spacing units.

(5) That it is not known at this time whether additional wells will be completed in the subject pool.

(6) That the operators in the subject pool have not established that one well can efficiently and economically drain and develop 80 acres.

(7) That the Special Rules and Regulations promulgated by Orders No. R-6489 and R-6489-A should be abolished.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the Stingray-Pennsylvanian Pool, Roosevelt County, New Mexico, promulgated by Order No. R-6489 and R-6489-A, are hereby abolished.

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

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

DRAFT

fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

CASE NO. 7023

Order No. R-6489-A

APPLICATION OF SHELL OIL COMPANY FOR POOL CREATION AND SPECIAL POOL RULES, ROOSEVELT COUNTY, NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the Division that Order No. R-6489, dated October 20, 19 80, does not correctly state the intended order of the Division,

IT IS THEREFORE ORDERED:

(1) That Order No. (1) on Page 2 of Order No. R-6489, Case No. 7023, be and the same is hereby corrected to read in its entirety as follows:

"(1) That a new pool in Roosevelt County, New Mexico, classified as an oil pool for Pennsylvanian production is hereby created and designated as the Stingray-Pennsylvanian Pool consisting of the following-described area:

TOWNSHIP 5 SOUTH, RANGE 32 EAST, NMPM
Section 2: SW/4"

(2) That the correction set forth in this order be effective nunc pro tunc as of October 20, 1980.

DONE at Santa Fe, New Mexico, on this _____ day of November, 1980.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7023
Order No. R-6489

APPLICATION OF SHELL OIL COMPANY
FOR POOL CREATION AND SPECIAL POOL
RULES, ROOSEVELT COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on October 1, 1980, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 20th day of October, 1980, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That a new oil pool for Pennsylvanian production should be created and designated the Stingray-Pennsylvanian Pool. This pool was discovered by the Shell Oil Company Askew Well No. 1, located in Unit L, Section 2, Township 5 South, Range 32 East, NMPM, Roosevelt County, New Mexico. The top of the perforations is at 7733 feet.

(3) That Shell Oil Company seeks the promulgation of temporary special rules and regulations for the Stingray-Pennsylvanian Pool to provide for 80-acre proration units and well location requirements.

(4) That the evidence presented concerning the reservoir characteristics of the Stingray-Pennsylvanian Pool justifies the establishment of 80-acre proration units in said pool for a temporary one year period.

prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. For good cause shown, the Director may grant an exception to the requirements of Rule 2 without notice and hearing when the application is for a non-standard unit comprising a single quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application if, after a period of 30 days, no offset operator has entered an objection to the formation of such non-standard unit.

The allowable assigned to any such non-standard unit shall bear the same ratio to a standard allowable in the Stingray-Pennsylvanian Pool as the acreage in such non-standard unit bears to 80 acres.

RULE 4. Each well drilled in the Stingray-Pennsylvanian Pool shall be located within 150 feet of the center of a governmental quarter-quarter section.

RULE 5. An 80-acre proration unit (79 through 81 acres) in the Stingray-Pennsylvanian Pool shall be assigned an 80-acre depth bracket allowable of 267 barrels per day and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

(3) That this case shall be reopened at an examiner hearing in October, 1981, at which time the operators in the subject pool may appear and show cause why the Stingray-Pennsylvanian Pool should not be developed on 40-acre proration units.

(4) That any operator desiring to dedicate 80 acres to a well in the Stingray-Pennsylvanian Pool shall file a new Form C-102 with the Division on or before November 1, 1980.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

RECEIVED
AUG 27 1980
Oil Conservation

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION OF SHELL OIL COMPANY)
FOR THE CREATION OF A NEW POOL)
AND FOR TEMPORARY SPECIAL POOL)
RULES FOR AN UNDESIGNATED POOL,) No. 7023
SECTION 2, TOWNSHIP 5 SOUTH,)
RANGE 33 EAST, N.M.P.M.,)
ROOSEVELT COUNTY, NEW MEXICO.)

APPLICATION

COMES NOW Shell Oil Company, by and through its attorneys, Montgomery & Andrews, P.A., and in support of its application herein states as follows:

1. Applicant has completed the Askew #1 Well at a standard location, 1980 feet from the South line and 660 feet from the West line, Section 2, Township 5 South, Range 33 East, N.M.P.M., Roosevelt County, New Mexico.

2. Applicant completed the aforesaid Well in the Pennsylvanian formation, the completion interval being from 7733 feet to 7763 feet.

3. On July 25, 1980, based on a rated 24-hour test, the well potential for the aforesaid Well was 75 barrels of oil per day which is considerably less than the statewide allowable for a well completed at such a depth.

4. Applicant seeks temporary special pool rules applicable to the Pennsylvanian formation, the top of which would be 7610 feet and the bottom of which would be 8034 feet, which would be the depth interval correlated to the aforesaid Askew #1 Well. Further, applicant requests that the special pool rules include a provision providing for 80 acre spacing.

5. The applicant would suggest to the Division that the name of the pool be the Stingray (Penn.).

6. The granting of the application is in the interest of the prevention of waste and the protection of correlative rights.

WHEREFORE, applicant respectfully requests that the Division set a day for hearing on the application and that it enter an order granting applicant's request for temporary special pool rules for an undesignated pool to be named the Stingray (Penn.) which would apply to applicant's Askew #1 Well located in Section 2, Township 5 South, Range 33 East, Roosevelt County, New Mexico.

DATED this 21th day of August, 1980.

Respectfully submitted,

MONTGOMERY & ANDREWS, P.A.

By _____

Owen M. Lopez
P. O. Box 2307
Santa Fe, New Mexico 87501

Attorneys for Applicant
Shell Oil Company

RECEIVED

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION OF SHELL OIL COMPANY)
FOR THE CREATION OF A NEW POOL)
AND FOR TEMPORARY SPECIAL POOL)
RULES FOR AN UNDESIGNATED POOL,) No. 7023
SECTION 2, TOWNSHIP 5 SOUTH,)
RANGE 33 EAST, N.M.P.M.,)
ROOSEVELT COUNTY, NEW MEXICO.)

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DATED this 21st day of August, 1980.

Respectfully submitted,

MONTGOMERY & ANDREWS, P.A.

By _____
Owen M. Lopez
P. O. Box 2307
Santa Fe, New Mexico 87501

Attorneys for Applicant
Shell Oil Company

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION OF SHELL OIL COMPANY)
FOR THE CREATION OF A NEW POOL)
AND FOR TEMPORARY SPECIAL POOL)
RULES FOR AN UNDESIGNATED POOL,) No. 7023
SECTION 2, TOWNSHIP 5 SOUTH,)
RANGE 33 EAST, N.M.P.M.,)
ROOSEVELT COUNTY, NEW MEXICO.)

APPLICATION

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WHEREFORE, applicant respectfully requests that the Division set a day for hearing on the application and that it enter an order granting applicant's request for temporary special pool rules for an undesignated pool to be named the Stingray (Penn.) which would apply to applicant's Askew #1 Well located in Section 2, Township 5 South, Range 33 East, Roosevelt County, New Mexico.

DATED this 21th day of August, 1980.

Respectfully submitted,

MONTGOMERY & ANDREWS, P.A.

By _____
Owen M. Lopez
P. O. Box 2307
Santa Fe, New Mexico 87501

Attorneys for Applicant
Shell Oil Company

ROUGH

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7023

Order No. R-6489

APPLICATION OF SHELL OIL COMPANY
FOR POOL CREATION AND SPECIAL POOL
RULES, ROOSEVELT COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on ~~September 17~~ Oct 1, 1980, at Santa Fe, New Mexico, before Examiner ~~Richard L. Stamets~~ DSN.

NOW, on this _____ day of ~~September~~ October, 1980, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That a new oil pool for Pennsylvanian production should be created and designated the Stingray-Pennsylvanian Pool. This pool was discovered by the Shell Oil Company Askew Well No. 1, located in Unit L, Section 2, Township 5 South, Range 32 East, NMPM, Roosevelt County, New Mexico. The top of the perforations is at 7733 feet.

(3) That Shell Oil Company seeks the promulgation of temporary special rules and regulations for the Stingray-Pennsylvanian Pool to provide for 80-acre proration units and well location requirements.

(4) That the evidence presented concerning the reservoir characteristics of the Stingray-Pennsylvanian Pool justifies the establishment of 80-acre proration units in said pool for a temporary one year period presently available.

(5) That the evidence establishes that the Stingray Pennsylvanian Pool may ~~can presently~~ be efficiently and economically drained on 80-acre proration units.

(6) That the evidence establishes that the subject pool should be developed with fixed well location requirements in order to protect correlative rights.

(7) That during the one-year period in which this order will be in effect, the applicant should gather all available information relative to drainage and recoverable reserves in the subject pool.

(8) That this case should be reopened at an examiner hearing in October, 1981, at which time the operators in the subject pool should appear and show by a preponderance of the evidence why the Stingray-Pennsylvanian Pool should not be developed on 40-acre proration units.

IT IS THEREFORE ORDERED:

(1) That a new pool in Roosevelt County, New Mexico, classified as an oil pool for Pennsylvanian production is hereby created and designated as the Stingray-Pennsylvanian Pool consisting of the following-described area:

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
Section 2: SW/4

(2) That special rules and regulations for the Stingray Pennsylvanian Pool are hereby promulgated as follows, effective October 1, 1980.

SPECIAL RULES AND REGULATIONS
FOR THE
Stingray-Pennsylvanian Pool

RULE 1. Each well completed or recompleted in the Stingray-Pennsylvanian Pool or in the Pennsylvanian formation within one mile of the Stingray-Pennsylvanian Pool, and not nearer to or within the limits of another designated Pennsylvanian pool shall be spaced, drilled, operated, and prorated in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or recompleted in the Stingray-Pennsylvanian Pool shall be located on a unit containing 80 acres, more or less, which consists of the N/2, S/2, E/2, or W/2 of a single governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. For good cause shown, the Director may grant an exception to the requirements of Rule 2 without notice and hearing when the application is for a non-standard unit comprising a single quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application if, after a period of 30 days, no offset operator has entered an objection to the formation of such non-standard unit.

The allowable assigned to any such non-standard unit shall bear the same ratio to a standard allowable in the Stingray-Pennsylvanian Pool as the acreage in such non-standard unit bears to 80 acres.

RULE 4. Each well drilled in the Stingray-Pennsylvanian Pool shall be located within 150 feet of the center of ~~in the NW/4 or the SE/4 of a governmental quarter section and shall not be located closer than 330 feet to~~ a governmental quarter-quarter section. ~~line.~~

RULE 5. An 80-acre proration unit (79 through 81 acres) in the Stingray-Pennsylvanian Pool shall be assigned an 80-acre ~~proportional factor for allowable purposes,~~ depth bracket allowable of 267 barrels per day and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

(3) That this case shall be reopened at an examiner hearing in October, 1981, at which time the operators in the subject pool may appear and show cause why the Stingray-Pennsylvanian Pool should not be developed on 40-acre proration units.

(4) That any operator desiring to dedicate 80 acres to a well in the Stingray-Pennsylvanian Pool shall file a new Form C-102 with the Division on or before November 1, 1980.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

Dockets Nos. 30-80 and 31-80 are tentatively set for October 1 and 15, 1980. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 17, 1980

9 A.M. - OIL CONSERVATION DIVISION 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:

ALLOWABLE: (1) Consideration of the allowable production of gas for October, 1980, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for October, 1980, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 7021: Application of Gulf Oil Corporation for simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of a previously approved 477-acre non-standard gas proration unit comprising the N/2 and SE/4 of Section 19, Township 19 South, Range 37 East, Eumont Gas Pool, to its B. V. Culp (NCT-A) Wells Nos. 3 and 9 located in Units F and J, respectively, of said Section 19.

CASE 6961: (Continued from August 20, 1980, Examiner Hearing)

Application of Conoco Inc. for a dual completion and unorthodox well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Meyer A-29 Well No. 11 to be drilled at an unorthodox location 990 feet from the North line and 660 feet from the East line of Section 29, Township 22 South, Range 36 East, to produce gas from the Langley-Devonian and -Ellenburger Pools thru parallel strings of tubing, the E/2 of said Section 29 to be dedicated to the well.

CASE 7022: Application of Texas Pacific Oil Company, Inc. for a non-standard proration unit and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of a 320-acre non-standard proration unit comprising the N/2 of Section 9, Township 22 South, Range 36 East, Jalmat Gas Pool, to its Wells Nos. 40 and 63 located in Units A and C, respectively, of said Section 9. Applicant further seeks approval to simultaneously dedicate its Wells Nos. 14, 36, 42, and 62 located in Units B, M, E, and K, respectively, of Section 11, Township 22 South, Range 36 East, to a standard proration unit to be comprised of all of said Section 11.

CASE 7008: (Continued from August 20, 1980, Examiner Hearing)

Application of Coronado Exploration Corp. for eight compulsory poolings, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying eight 40-acre proration units, being the NE/4 NE/4 of Section 4 and the NW/4 NE/4 of Section 5, both in Township 12 South, Range 28 East, and the NW/4 SE/4 of Section 6, the NE/4 NW/4 of Section 23, the NE/4 SE/4 of Section 28, the SE/4 SE/4 of Section 29, the NE/4 NW/4 of Section 32, and the SE/4 NW/4 of Section 33, all in Township 11 South, Range 28 East, each to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells, and a charge for risk involved in drilling said wells.

CASE 7004: (Continued from August 20, 1980, Examiner Hearing)

Application of Anadarko Production Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Morrow formations underlying the N/2 of Section 12, Township 19 South, Range 25 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7023: Application of Shell Oil Company for pool creation and temporary special pool rules, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Pennsylvanian oil pool for its Askew Well No. 1 located in Unit L of Section 2, Township 5 South, Range 33 East, and the promulgation of special pool rules therefor, including a provision for 80-acre spacing.

API# 30-0 -20533

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Exhibit No. 7

Form C-105
Revised 11-1-58

NEW MEXICO OIL CONSERVATION COMMISSION

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease: State [ ] Fee [X]

5. State Oil & Gas Lease No.: NM 20533

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] OTHER

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEPEN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] OTHER

7. Unit Agreement Name:

8. Farm or Lease Name: Shell Askew

2. Name of Operator: Shell Oil Company

9. Well No.: 1

3. Address of Operator: P.O. Box 991, 237 T&C, Houston, TX 77001

10. Field and Pool, or Wildcat: Wildcat

4. Location of Well: UNIT LETTER L LOCATED 1980 FEET FROM THE south LINE AND 660 FEET FROM THE west LINE OF SEC. 2 TWP. 5S RGE. 32E NMPM

12. County: Roosevelt

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Cashinghead
4-9-80	5-25-80	7/25/80	4493.2' GR	

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools	Cable Tools
8973'	8280'		→	Rotary	

24. Producing Interval(s), of this completion — Top, Bottom, Name: 7733'-7763'

25. Was Directional Survey Made: No

26. Type Electric and Other Logs Run: MLL/ML, GNL/GR

27. Was Well Cored: Yes

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
20"	conductor	40'	24"	40 sx Redi Mix	0
13 3/8"	48#	412'	17 1/2"	550 sx Class C	0
8 5/8"	32#	3325'	12 1/4"	750 sx Class H,800sx Lite	0
5 1/2"	17,20,15.5,14	8330'	7 7/8"	1770 sx Class H	0

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2 7/8"	7575	7575

31. Perforation Record (Interval, size and number): 7733'-7763' 15 holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
7733-7763	2000 gals 7% HCL
	3000 gals 20% HCL

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping — Size and type pump)	Well Status (Prod. or Shut-in)
6/30/80	swabbing	shut-in

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas—Oil Ratio
6/30/80	8	--		25	TSTM	48	--

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity — API (Corr.)
0	0		75	TSTM	144	43.4° @60°F

34. Disposition of Gas (Sold, used for fuel, vented, etc.): No gas recorded

Test Witnessed By:

35. List of Attachments: Inclination Survey

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED A. J. Fore TITLE Senior Engr. Technician DATE 7-25-80

EXHIBIT No. 8

DATA SHEET

SHELL ASKEW NO. 1-2

PHYSICAL PROPERTIES OF RESERVOIR ROCKS

Average Porosity (%) = 7 log analysis

Average Permeability (md) = 3 core analysis

Average oil and interstitial water saturations (%) = So 69
Sw 31

RESERVOIR FLUID CHARACTERISTICS

Average Gravity of Oil --- 44.4 API @ 60°

Average Gravity of Gas --- 1.0827 @ 60°

Formation Volume Factor --- 1.1

Viscosity of Oil (Centipoises) --- 0.758

Exhibit No. 9

AREA FIELDS HAVING 80 ACRE SPACING OR MORE

Field Name	Location	County	Spacing
Allison-Penn.	T-8 & 9-S, R-36 & 37-E	Lea & Roosevelt	80
Inbe - Penn.	T-10 & 11-S, R-33 & 34-E	Lea	80
Prairie Cisco	T-8-S, R-36-E	Roosevelt	80
Vada - Penn	T-8-S, R-34/36-E T-9-S, R-33/36-E T-10-S, R-33/34-E	Lea & Roosevelt	160

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
17 September 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Shell Oil Company for pool creation and temporary special pool rules, Roosevelt County, New Mexico.

CASE 7023

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

MR. STAMETS: We'll call next Case 7023.

MR. PADILLA: Application of Shell Oil Company for pool creation and temporary special pool rules, Roosevelt County, New Mexico.

MR. STAMETS: At the request of the applicant this case will be continued to the October 1st Examiner Hearing.

(Hearing concluded.)

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7023, heard by me on 9-12, 1980.

Richard L. Stamets, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
17 September 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Shell Oil Company for pool creation and temporary special pool rules, Roosevelt County, New Mexico.

CASE 7023

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

MR. STAMETS: We'll call next Case 7023.

MR. PADILLA: Application of Shell Oil Company for pool creation and temporary special pool rules, Roosevelt County, New Mexico.

MR. STAMETS: At the request of the applicant this case will be continued to the October 1st Examiner Hearing.

(Hearing concluded.)

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

_____

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. ____, heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
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September 10, 1980

New Mexico Oil Conservation
Commission
State Land Office Building
Santa Fe, New Mexico 87503

Attention: Mr. Richard L. Stamets, Examiner

Re: Application of Shell Oil Company for Pool Creation and Temporary Special Pool Rules, Roosevelt County, New Mexico
N.M.O.C.C. Case No. 7023

Gentlemen:

We hereby request a continuance of the above-referenced case from Wednesday, September 17, 1980 to Wednesday, October 1, 1980.

Thank you for your consideration in this matter.

Sincerely,

Owen M. Lopez

OML:to

cc: Mr. Ernie Padilla

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PROFESSIONAL ASSOCIATION
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Dockets Nos. 31-80 and 32-80 are tentatively set for October 15 and 29, 1980. Applications for hearing must be filed at least 22 dqys in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 1, 1980

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

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

CASE 7029: In the matter of the hearing called by the Oil Conservation Division on its own motion to consider amendments to its special rules and procedures for the designation of "tight formation", promulgated by Division Order No. R-6388, to comply with FERC Order No. 99, issued August 15, 1980, promulgating final regulations with respect to Section 107 of the NGPA.

CASE 7030: In the matter of the hearing called by the Oil Conservation Division on its own motion to consider amendments to its SPECIAL RULES FOR APPLICATIONS FOR WELLHEAD PRICE CEILING CATEGORY DETERMINATIONS as promulgated by Division Order No. R-5878, as amended. The proposed amendments relate to individual well filings for price category determination as "tight formation" gas under Section 107 of the NGPA.

CASE 7031: Application of Coronado Exploration Corp. for a unit agreement, Guadalupe County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Mesa Leon Unit Area, comprising 15,680 acres, more or less, of State, Federal, and fee lands in Township 6 North, Range 17 East.

CASE 7007: (Continued from September 3, 1980, Examiner Hearing)

Application of Harvey E. Yates Company for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Morrow and Atoka production in the wellbore of its North Travis 12 Deep Well No. 1 located in Unit O of Section 12, Township 18 South, Range 28 East.

CASE 7023: (Continued from September 17, 1980, Examiner Hearing)

Application of Shell Oil Company for pool creation and temporary special pool rules, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Pennsylvanian oil pool for its Askew Well No. 1 located in Unit L of Section 2, Township 5 South, Range 33 East, and the promulgation of special pool rules therefor, including a provision for 80-acre spacing.

CASE 7019: (Continued from September 17, 1980, Examiner Hearing)

Application of Amoco Production Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the W/2 of Section 30, Township 23 South, Range 25 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7032: Application of Dalport Oil Corporation for an exception to Order No. R-3221, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221 to permit disposal of produced brine into an unlined surface pit located between Units L and M of Section 9, Township 15 South, Range 30 East.

CASE 7033: Application of Adams Exploration Inc. for three non-standard proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of three 80-acre non-standard proration units in the Vada-Pennsylvanian Pool, comprising the following acreage: SE/4 NE/4 and NE/4 SE/4 of Section 12, N/2 NE/4 of Section 12, and S/2 SE/4 of Section 2, all in Township 9 South, Range 34 East.

CASE 6940: (Continued from August 20, 1980, Examiner Hearing)

Application of Adobe Oil Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down through the Wolfcamp formation underlying the NW/4 SE/4 for oil and the SE/4 for gas, Section 23, Township 20 South, Range 38 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 6618: (Reopened and Readvertised)

In the matter of Case 6618 being reopened pursuant to the provisions of Order No. R-6103 which order created the Travis-Yates Gas Pool in Eddy County, New Mexico, with temporary special rules and regulations including a provision for 80-acre spacing units. Operators in said pool may appear and show cause why the pool should not be developed on 160-acre spacing units.

CASE 6648: (Reopened and Readvertised)

In the matter of Case 6648 being reopened pursuant to the provisions of Order No. R-6124 which order promulgated temporary special rules and regulations for the North Caprock-Mississippian Pool in Lea County, New Mexico, including a provision for 160-acre spacing and a 4000 to one gas-oil ratio limitation. Operators in said pool may appear and show cause why the pool should not be developed on 40-acre spacing with a 2000 to one GOR.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

October 23, 1980

Re: CASE NO. 7023
ORDER NO. R-6489

Mr. Owen Lopez
Montgomery, Andrews & Hannahs
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico 87501

Applicant:

Shell Oil Company

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other