

1 STATE OF NEW MEXICO
2 ENERGY AND MINERALS DEPARTMENT
3 OIL CONSERVATION DIVISION
4 STATE LAND OFFICE BLDG.
5 SANTA FE, NEW MEXICO

6 23 May 1984

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Earle M. Craig, Jr. CASE
10 Corp. for a unit agreement, Lea 9172
County, New Mexico.

11
12
13 BEFORE: Michael E. Stogner, Examiner

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15 TRANSCRIPT OF HEARING

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17 A P P E A R A N C E S

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20 For the Oil Conservation Division: W. Perry Pearce
21 Attorney at Law
22 Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

23 For the Applicant:
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MR. STOGNER: This hearing will
be called to order.

We'll call first case this
morning, Case Number 8172.

MR. PEARCE: That case is on
the application of Earle M. Craig, Jr. Corporation for a
unit agreement, Lea County, New Mexico.

MR. PEARCE: Mr. Examiner, this
matter has been previously heard and was readvertised.

MR. STOGNER: We will now call
for appearances or any additional testimony at this time.

Being none, this case will be
taken under advisement.

(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. 8172, heard by me on May 23 1984.

Michael E. Rogers, Examiner
Oil Conservation Division

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NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date MAY 9, 1984 Time: 8:00 A.M.

NAME	REPRESENTING	LOCATION
Bob Huhner	Byram	Santa Fe
Carl M. Houser	Bell North	Houston TX
MICHAEL R. HERRINGTON	Union TEXAS PETROLEUM COOP	FARMINGTON NM
Conrad [unclear]	Wardlaw Law Firm	Midland, TX
Edsel Nuff	David Petroleum	Rawell, N Mex
JAMES F. O'BRIAN	ROBERT N. ENFIELD	Midland, TX
Lee Clements	NMOCD	Artesia, NM
Ernest L. Padilla	Bill Scott	SF, NM
Katie Krueger	Amoco	Houston, TX
Steve Scheffler	"	" TX
Jim Bruce	Hinkle Law Firm	Santa Fe
Paul Cooter	Rode Law Firm	Santa Fe
Bill Scott	Cedar Lake Oil	Loco Hills NM
Shirley Foy	Earle M. Craig Jr. Corp	Midland, Texas
Wayne R. Gibson	Earle M. Craig Jr Corp	Midland, TX
R. [unclear]	R. [unclear]	Santa Fe
William A. [unclear]	Samphell [unclear] Black	Santa Fe

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date MAY 9, 1984 Time: 8:00 A.M.

NAME	REPRESENTING	LOCATION
Dan Hutter	Cons. Engr	Santa Fe
Charles Gholson	OCD	AZTEC
W.V. Kellodine	Kellodine & Kellodine	Santa Fe
Stogard	OCD	Santa Fe
Bill Thomas	Mabee Petr.	Midland
Robert V. Lockhart	Union Oil Company of California	Midland, TX
Stacie A. Kruer	Union Oil Co. of Cal.	Midland, TX
JOHN McDERMOTT	MABEE PETR. CORP.	MIDLAND, TX
VERNE E HULL	MARATHON OIL	MIDLAND, TX
Russ Holmberg	Marathon Oil	Midland, TX
Joe T Janica	Marline Petroleum	Houston, TX
Jay Janica	" "	"
M.C. Arouse.	" "	"
BILL HAHNE	UNION TEXAS PETR	FARMINGTON, NM

1 STATE OF NEW MEXICO
2 ENERGY AND MINERALS DEPT.
3 OIL CONSERVATION DIVISION
4 STATE LAND OFFICE BLDG.
5 SANTA FE, NEW MEXICO
6 9 May 1984

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of James F. Deven- CASE
10 port & Company for a unit agree- 8172
11 ment, Lea County, New Mexico.

12 BEFORE: Richard L. Stamets, Examiner
13

14 TRANSCRIPT OF HEARING

15 A P P E A R A N C E S

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20 For the Oil Conservation
21 Division:

W. Perry Pearce
Attorney at Law
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

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23 For the Applicant:

Paul Cooter
Attorney at Law
Santa Fe, New Mexico 87501
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I N D E X

STEVEN R. FOY

Direct Examination by Mr. Cooter

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WAYNE GIBSON

Direct Examination by Mr. Cooter

10

E X H I B I T S

Applicant Exhibit One, Unit Agreement

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Applicant Exhibit Two, Plat

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Applicant Exhibit Three, Schedule

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Applicant Exhibit Four, Letter

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Applicant Exhibit Five, Letter

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Applicant Exhibit Six, Operating Agreement

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Applicant Exhibit Seven, Base Map

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Applicant Exhibit Eight, Cross Section

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Applicant Exhibit Nine, Contour Map

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Applicant Exhibit Ten, Isolith

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MR. STAMETS: We'll call next Case 8172.

MR. PEARCE: That case is on the application of James F. Devenport & Company for a unit agreement, Lea County, New Mexico.

MR. COOTER: Mr. Examiner, I'm Paul Cooter with the Rodey Law Firm here in Santa Fe.

We have two witnesses that need to be sworn, Steven Foy and Wayne Gibson.

MR. PEARCE: Are there other appearances in this matter?

(Witnesses sworn.)

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

DIRECT EXAMINATION

BY MR. COOTER:

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

A My name is Steven R. Foy.

Q By whom are you employed, Mr. Foy?

A Earl M. Craig, Jr. Corporation.

Q And what's your position with that company?

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A I'm a landman.

Q Are you familiar with the application that has been filed in this case?

A Yes, I am.

Q What is sought by that application?

A To establish a Federal and State exploratory unit for the drilling of a Lower Morrow test.

Q Who is the real party in interest, Mr. Foy?

A Earl M. Craig, Jr. Corporation is the intended operator and we have the majority interest, but we've got a number of partners and reversionary interests involved.

Q This was filed in the name or appears in the name of James F. Devenport and Company. Why was that?

A James F. Devenport and Company is a consulting firm that is used extensively by Earl M. Craig, Jr. Corporation. The submittal that was sent did indicate in the unit agreement and the operating agreement that Earl M. Craig, Jr. Corporation would be the operator; however, it was on the James F. Devenport letterhead and that's how it appeared.

Q Let me direct your attention to what has been marked as Exhibit One. What is that?

A It's a unit agreement prepared to effect this Federal and State exploratory unit. It is the model form language that -- as published by the Federal Register

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with the additions of language making it subject to the Commission or the Oil Conservation Division and the State of New Mexico, and then it also addresses our particular case as the unitized area and formations.

Q What formations would be unitized under that agreement?

A Everything from the top of the Delaware formation on down.

Q What -- well, let me withdraw that and we'll come to it in a minute.

Let me next direct your attention to Exhibit Two.

What has been marked as Exhibit Two for this hearing is also marked as Exhibit A to the unit agreement, is it not?

A Yes, it is.

Q And it is a plat of the unit area?

A Yes, it is.

Q The unit area comprises some 3500 acres. I believe you mentioned previously it's State and Federal lands?

A Yes.

Q There are no fee lands in the unit?

A That's correct.

Q Which are the Federal and how are they marked and which are the State?

A The Federal lands are shown by these

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lateral cross hatches, which are all the land in the township to the north, Township 20 South, 34 East.

Everything to the south is State land with the exception of the 40 acres in the southeast southeast of Section 1, which is designated Tract No. 7. That is also Federal acreage.

Q From this plat could you tell the Examiner what -- what companies have indicated or what lessees have indicated their assent to the unit?

A Okay. Do wish that on a tract by tract basis?

Q Maybe it would be easier to say who has not indicated their desire to join in the unit.

A Okay. Of the entire unit, in Tract No. 2 in Section 33, the Federal acreage to the north, ARCO at this time has said that they would not commit their acreage to the unit. They own approximately 82 percent of that 160 acres.

In Tract No. 1 Texaco will commit all their acreage in that section, in the west half of the section, to the unit. They intend to not commit the east 280 acres of the section.

And then in Tract 17 we are currently under negotiations with the Estate of Allen K. Traubough (sic) about commitment of that particular tract.

The remainder of the unit, we have received some sort of verbal or written commitment and antici-

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pate their participation or joinder in some way.

MR. STAMETS: Excuse me, did you say Tract 13?

A The Tract 17 was the Traubough tract, I'm sorry.

MR. STAMETS: I don't know if I heard wrong or not.

Q Next let me direct your attention to Exhibit Three, Mr. Foy.

What has been marked for this hearing as Exhibit Three is also marked as Exhibit B to the unit agreement, is it not?

A Yes, it is.

Q And what is that?

A It is a schedule of the leases by tract number corresponding with tract numbers on the plat.

Q Turn next to Exhibit Four, if you would. That is a letter from the BLM?

A Yes, it is.

Q Dated?

A April 3rd, 1984.

Q And briefly summarize that letter, if you would.

A It's a letter that designates our unit area as outlined by our plat as logically subject to unitization.

Q Now that is the plat which is Exhibit Two

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2 for this hearing?

3 A Yes.

4 Q With the schedule that has been marked as
5 Exhibit Three.

6 A That's correct.

7 Q And, go ahead.

8 A It is also a preliminary approval of our
9 agreements as to form.

10 Q That is the unit agreement which is Exhi-
11 bit One?

12 A Yes.

13 Q Turn next to Exhibit Five, Mr. Foy. That
14 is a letter from the Commissioner of Public Lands?

15 A Yes, it is.

16 Q Dated?

17 A March 12th, 1984.

18 Q Briefly summarize that for the Examiner,
19 if you would.

20 A This is also preliminary approval as to
21 form and content of the agreements that are submitted here
22 as exhibits.

23 Q Turn next to Exhibit Six. What is that?

24 A This is our proposed operating agreement
25 for this unit.

Q Let me briefly direct your attention to
Exhibit A to that agreement. Those cover the same lands and
the same parties as has been previously identified in the

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Exhibit One, Two, and Three?

A Yes.

Q It also sets forth in that exhibit, does it not, the interests of the parties?

A Yes, it does.

Q May that be subject to some revision when the unit agreement itself is finalized and executed by those parties that desire to do so?

A Yes, it will be subject to some change, although we think it will not be a very great change. We think it will be very small percentages.

MR. COOTER: At this time, Mr. Examiner, we would offer Exhibits One through Six.

MR. STAMETS: These exhibits will be admitted.

Q Mr. Foy, in your opinion do the agreements that have been marked as exhibits and which you've testified about afford effective control of the operations in the unit area?

A Yes.

Q For the formations that are unitized in effect from the top of the Delaware down?

A Yes, it will.

Q Would the approval of that operation prevent waste and protect correlative rights of both the mineral owners and the owners of the leasehold rights?

A Yes.

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Q And do you believe that it would be in the best interest of conservation?

A Yes.

MR. COOTER: I have nothing further from this witness.

MR. STAMETS: Are there any questions of the witness? He may be excused.

MR. COOTER: Mr. Gibson.

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

DIRECT EXAMINATION

BY MR. COOTER:

Q Would you state your name, sir?

A Wayne Gibson.

Q And by whom are you employed, Mr. Gibson?

A Earl M. Craig, Jr. Corporation.

Q And in what position?

A As Manager of Geology and Geophysics.

Q Have you previously testified before this Commission?

A No, I have not.

Q Would you briefly relate to the Examiner your educational and your professional background?

A I received a Bachelor of Arts degree in

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1968 from Susquehanna University in Pennsylvania, and a Masters degree with a major in geology from the University of Wisconsin in 1971.

And I have worked in the oil business and lived in Midland, Texas since January 3rd, 1971, with the exception of three months in the -- on the Engineer School at Fort Belvoir in Virginia.

Q Has your professional experience all been with the Earl M. Craig, Jr. Corporation?

A I worked for Texaco in Midland, Texas for eight and a half years and have worked nearly five years for Earl M. Craig, Jr. Corporation.

Q What positions did you hold with Texaco?

A With Texaco I was an exploration geologist and then subsequently a District Supervisory Geologist, and explored in the Permian Basin area and New Mexico, New Mexico Delaware Basin, Midland Basin.

Q And then when did you go to work for the Earl M. Craig, Jr. Corporation?

A In --

Q Approximately, is good enough.

A Just not quite five years ago in July.

Q And have you held your present position with that corporation since that time?

A I was a geologist employed originally as an exploration geologist and have been Manager of Geology and Geophysics for about the last two and a half years.

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MR. COOTER: Are the witness' qualifications acceptable to the Commission?

MR. STAMETS: They are.

Q Mr. Gibson, are you acquainted with the area included in the proposed Enterprise Deep Unit?

A Yes, I am.

Q You have a series of maps, I believe, marked as Exhibits Seven through Ten. Do you want to cover them in that order?

A Yes.

Q All right, let me direct your attention first to Exhibit Seven and ask you to tell the Examiner what that is, what it depicts, and other relevant information that you may have on it.

A Exhibit Seven is a one inch equals 2000 foot scale base map of the proposed unit area and the surrounding area.

Annotated on the map are the locations of the wells and total depths of most of the wells.

Also annotated are field discovery dates, producing zones, and cumulative total and average production for the field.

In addition, we have indicated the producing zones with a legend or with a code which is summarized in two legends down below. One is called Production Horizons. The other one is called Morrow Production and it has to do with production quality or total production per

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2 well.

3 The square symbols which are colored yel-
4 low and I apologize because your illustrations aren't col-
5 ored, but the square symbols indicate for the most part Low-
6 er Morrow production, and the squares indicate Lower Morrow
7 Production except for the Lea Field itself in Sections 11,
8 12, 13 and 14, Township 20 South, Range 34 East, where the
9 squares may indicate either Devonian and/or Lower Morrow
10 production.

11 The production on the map which is not --
12 the wells on the map which are not circled or annotated in
13 some way are shallow producers or shallow dry holes typical-
14 ly to a depth of about below -- above 4000 feet in shallow
15 formations.

16 One of the things that this map indicates
17 is that there is shallow, there is or was shallow oil pro-
18 duction over the area of the proposed unit and for this
19 reason the shallow formations, specifically the Yates and
20 Seven Rivers, are not included in the unit and the unit
21 boundary, the vertical boundary was -- is proposed to be the
22 top of the Delaware Sand formation and that -- I've got some
23 depths in two of the wells, in the Gulf South Lea -- Gulf
24 South Lynch Unit. The top of the Delaware formation is at
25 5580 and in the Superior (Union) West Lynch Unit the top of
the Delaware formation is at 5770.

 We picked the Delaware formation because
it's well below the producing horizons in the shallow and

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because it's readily identifiable.

That's --

Q Want to go to Exhibit Eight? What is depicted by Exhibit Eight, Mr. Gibson?

A Exhibit Eight is a structural cross section using three wireline open hole electric logs. Exhibit Eight also includes a location map showing the line or the traverse across section, the location of the logs used, and identified on Exhibit Eight are the stratigraphic horizons used on our contour maps; the top of the Lower Morrow sandstone, the top of the Upper Morrow sandstone is also shown.

 The top of the Lower Morrow is the contour horizon on the following map.

 Also shown is a prominent fault on the east side of the unit area. That fault is colored in green.

 The cross section demonstrates an east/west structural reversal over the unit area.

Q Before you fold that up, I believe that the unit area shown at the bottom of the exhibit does not include in that the south half of Section 33, is that correct?

A That's correct, the south half of 33 is included in the unit and it should be annotated on this location map.

Q And that was included at the -- pursuant to the direction of the Bureau of Land Management, was it not?

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A That's correct.

Q There is one 160-acre tract which is the southwest quarter of Section 33. Then there is a 40-acre tract in Section 34, which is the southeast quarter of the northeast quarter, which appear on Exhibit Number Two as open. Those are Federal lands which will be offered for lease at subject, however, to the unit agreement if this unit agreement is approved and finalized, is that correct?

A Yes, that's correct.

Q All right, let's turn next to Exhibit Nine.

Is there anything else you want to say on this one?

A No.

Q Turn to Nine, if you would, and tell us what that shows.

A Exhibit Nine is a structural contour map contoured on the Lower Morrow horizon. The map scale is one inch equals 2000 feet, and the unit area is annotated in orange on this map.

Datum points from well logs, from all well logs which penetrated the Lower Morrow are -- are underlined in green and annotated on the map.

The fault identified on the previous cross section, the north/south trending fault, is identified in green and also an interpreted fault running east/west is identified in green.

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2 The map shows a prominent structural nos-
3 ing, which is south plunging. It shows a -- demonstrates a
4 pronounced flattening or a low angle absence of steep angle
5 dip in the unit area and then a steepening of dip south of
6 the unit, proposed unit area.

7 The -- a structural nose similar to this
8 is a favorable place to look for Morrow gas reserves and I
9 can point to analogies west in the Salt Lake South Field and
10 south in the Pitchfork Ranch Field where production occurs
11 in Morrow stratigraphic traps on a south plunging structural
12 nose.

13 Q Mr. Gibson, from your study of the geol-
14 ogy in the proposed Deep Enterprise Unit, is that a logical
15 unit area for the formations which are proposed for unitiza-
16 tion?

17 A Based on this map and on the following
18 map, which is a sand Isolith in the reservoir, this is a
19 logical area for unitization.

20 Q Are you ready to go to Exhibit Ten? If
21 there is anything else you want to say about this exhibit,
22 do so.

23 A There's one other point and that is in
24 addition to the well data points with the contouring, the
25 presence of a shallow structure which resulted in consider-
able shallow Yates-Seven Rivers production since 1930, is
probably a reflection of underlying deep structure or flat-
tening, and has influenced our deep interpretation.

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2 Q Now you're going to -- you have Exhibit
3 Ten in front of you. What is that?

4 A Exhibit Ten is a sandstone Isolith map
5 contoured on the clean or clay-free sand in the Lower Morrow
6 formation and the Lower Morrow formation as identified on
7 the previously submitted cross section, Exhibit Seven. Ex-
8 hibit, correction, Exhibit Eight.

9 The clean sand was determined based on
10 gamma ray logs and it was determined based on the difference
11 between a shale base line and the cleanest sand in the Mor-
12 row interval, and it was determined based on 70 percent of
13 that range, with the object being to identify clay-free
14 sands which will have a higher permeability, which are like-
15 ly to have a higher permeability than clay rich sands.

16 We've selected as a logical economic pros-
17 pect limits and unit outline 25 feet of Lower Morrow sand as
18 an economic limit, and to help us determine that footage the
19 Union West Lynch Deep in the south half of Section 28 was
20 completed from the Lower Morrow with a clean sand value of
21 32 feet and a gross perforated interval of 26 feet. It has
22 not -- it had a good initial potential on its minimum 4-
23 point flow test. It flowed at a rate of 1.26 million cubic
24 feet of gas per day, 12/64th inch choke, 3412 psi. It has
25 not been a real good producer but it did have a good poten-
tial.

We feel that 25 feet is a good cutoff
limit for our economic prospect limits and to utilize as a

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prospect boundary.

The map shows the sands in question are pinching out to the south or facies changing out. The basal shales to the south have very thin sands to the south and thicker sands in the unit area.

The sand thickness values, clean sand thickness values on which the map is based are highlighted in green for most of the wells on the map.

Q Mr. Gibson, were Exhibits Numbers Seven through Ten prepared by you or under your direction and supervision?

A Under my direction and supervision.

MR. COOTER: We offer at this time Exhibits Seven through Ten.

MR. STAMETS: These exhibits will be admitted.

Q Mr. Gibson, in your opinion would the approval of the proposed unit and the development pursuant to that agreement prevent waste and be in the best interest of conservation?

A Yes.

MR. COOTER: That's all we have from this witness.

MR. STAMETS: Are there any questions for the witness? He may be excused.

MR. COOTER: That concludes our case. We do have an extra set of exhibits if you --

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MR. STAMETS: I think two will
be fine.

MR. COOTER: Okay, thank you.

MR. STAMETS: Anything further
in this case?

The case will be taken under
advisement.

(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. 8123 heard by me on 5-9 1984.
Richard P. Slamm, Examiner
Oil Conservation Division