

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

6 22 June 1988

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Inexco Oil Company for CASE  
10 an unorthodox oil well location, Lea 9418  
11 County, New Mexico.

12 BEFORE: Michael E. Stogner, Examiner  
13  
14  
15

16 TRANSCRIPT OF HEARING

17 A P P E A R A N C E S  
18

19 For the Division: Robert G. Stovall  
20 Attorney at Law  
21 Legal Counsel to the Division  
State Land Office Bldg.  
Santa Fe, New Mexico

22 For the Applicant: James Bruce  
23 Attorney at Law  
24 HINKLE LAW FIRM  
P. O. Box 2068  
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## I N D E X

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1 MR. STOGNER: Call next Case  
2 Number 9418, which is the application of Inexco Oil Com-  
3 pany for an unorthodox oil well location, Lea County, New  
4 Mexico.

5 Call for appearances.

6 MR. BRUCE: Mr. Examiner, my  
7 name is James Bruce from the Hinkle Law Firm in Santa Fe,  
8 representing the applicant in this matter.

9 I have two witnesses to be  
10 sworn.

11 MR. STOGNER: Are there any  
12 other appearances?

13 There being none, will the  
14 witness please stand and be sworn?

15  
16 (Witness sworn.)

17  
18 Mr. Bruce.

19  
20 RICKY W. RAINDL,  
21 being called as a witness and being duly sworn upon his  
22 oath, testified as follows, to-wit:

23  
24 DIRECT EXAMINATION

25 BY MR. BRUCE:

1           Q           Would you please state your full name  
2 and city of residence, please?

3           A           Ricky D. Raindl, Roswell, New Mexico.

4           Q           And what is your occupation and who are  
5 you employed by?

6           A           I'm a petroleum landman performing my  
7 services now on contract with Inexco Oil Company.

8           Q           And is Inexco a wholly owned subsidiary  
9 of the Louisiana Land and Exploration Company?

10          A           Yes, it is.

11          Q           Have you previously testified before the  
12 Division as a landman?

13          A           No.

14          Q           Would you briefly state your educational  
15 and employment background?

16          A           Highest level of formal education was  
17 two semesters of college and I've worked for the past ten  
18 years in eastern New Mexico and west Texas.

19          Q           And are you familiar with the land  
20 matters involved in Case 9418?

21          A           Yes.

22                               MR. BRUCE; Mr. Examiner, are  
23 the witness' credentials acceptable?

24                               MR. STOGNER: Mr. Raindl,  
25 again, how long have you been working as a landman?

1           A           For ten years, the last ten years.

2                           MR. STOGNER: Mr. Raindl is so  
3 qualified as a practical landman.

4           Q           Mr. Raindl, would you briefly state what  
5 Inexco Oil Company seeks in this application?

6           A           Inexco Oil Company seeks approval for an  
7 unorthodox oil well location for a well to be drilled at a  
8 location 1200 feet from the north line and 500 feet from  
9 the west line of Section 17, Township 16 South, Range 36  
10 East, Lea County, New Mexico.

11                       The well will be drilled to test the  
12 Strawn formation and is within one mile of the West  
13 Lovington Pennsylvanian Pool.

14                       The northwest quarter northwest quarter  
15 of Section 17 will be dedicated to the well forming a  
16 standard 40-acre spacing and proration unit.

17           Q           Would you please refer to Exhibit One  
18 and discuss its contents?

19           A           Exhibit Number One is a land plat  
20 showing the proposed well marked in red in Section 17. The  
21 unit is in the northwest quarter northwest quarter of Sec-  
22 tion 17. Inexco Oil Company acreage in the area is indi-  
23 cated in yellow. The solid yellow indicates 100 percent  
24 Inexco acreage and the white and yellow acreage indicates  
25 where Inexco has less than 100 percent working interest.

1                   In the north half of Section 17 Inexco  
2 controls 100 percent.

3                   Statewide rules apply to the West  
4 Lovington Pennsylvanian Pool and wells may be located no  
5 closer than 330 feet to the outer boundary of the unit.  
6 As a result the well is unorthodox in a southerly direction  
7 and is located 210 feet closer to the southern quarter  
8 quarter section line than is prescribed by the rules.

9                   The well encroaches only on Inexco  
10 acreage. The well is within the jurisdiction of the  
11 Lovington Lea County Extraterritorial Zoning Commission and  
12 they have preliminarily granted approval of this location.

13                  Q           Have offset operators or leasehold  
14 owners been notified of this application?

15                  A           Yes, they have. The offset operators or  
16 leaseowners in the northeast corner of Section 18 are Mesa  
17 Operating Limited Partnership, Barbara Faskin and John  
18 Echols. A letter notifying the offset operators or lease-  
19 hold was sent on May 30th, 1988, by certified mail. A copy  
20 of this notification letter, together with a copy of the  
21 certified return receipt is submitted as Exhibit Number  
22 Two.

23                  Q           In your opinion will the granting of  
24 this application be in the interest of conservation and the  
25 prevention of waste?

1           A           Yes.

2           Q           And were Exhibit Numbers One and Two  
3 prepared by you, under your direction, or compiled from  
4 company records?

5           A           Yes.

6                           MR. BRUCE; Mr. Examiner, I  
7 move the admission of Exhibits One and Two.

8                           MR. STOGNER: Exhibits One and  
9 Two will be admitted into evidence.

10                          MR. BRUCE: And I have no --  
11 nothing further of this witness at this time.

12

13                           CROSS EXAMINATION

14 BY MR. STOGNER:

15           Q           Mr. Raindl, what offset acreage does Mr.  
16 Echols own?

17           A           In the northeast quarter of Section 18.

18           Q           And that's marked with blue -- I mean  
19 the white and yellow stripes, right?

20           A           Yes, sir.

21           Q           Okay, How about Barbara Faskin?

22           A           Barbara Faskin also owns an interest in  
23 the northeast of 18.

24           Q           And, of course, Mesa Operating has the  
25 80 acres in the southeast quarter -- south half southeast

1 quarter of Section 7, is that correct? No, yes, where it  
2 says Mesa Petroleum?

3 A Yes. Yes.

4 Q Okay, and all the other acreage belongs  
5 to Inexco, is that correct?

6 A Right. Here in the northeast of 18 the  
7 solid yellow is Inexco in 8 and Barbara Faskin and Amoco  
8 Production Company have an interest in the south half of  
9 17.

10 Q Does Amoco have any interest in the --  
11 any of the northeast quarter of 17 -- I'm sorry, the north-  
12 west quarter of 17?

13 A Yes, sir, but it's controlled by Inexco.

14 Q Okay. Now this is the second case I've  
15 ran into where the Lovington Extraterritorial Zoning  
16 Commission -- how far out does their authority extend?

17 A One mile from the city limits.

18 Q How did you guys get drug in?

19 A Well, their ordinance that was passed  
20 called for the complete Section 17 so we went ahead and  
21 went with them rather than to say no, you have no author-  
22 ity.

23 Q Okay. I guess that's what happens.

24 MR. STOGNER: I have no fur-  
25 ther questions of Mr. Raindl.



1 Are there any other questions  
2 of this witness?

3 Thank you, Mr. Raindl. Mr.  
4 Bruce?

5 MR. BRUCE: Call Mr. Caughey  
6 to the stand.

7  
8 CHARLES A. CAUGHEY,  
9 being called as a witness and being duly sworn upon his  
10 oath, testified as follows, to-wit:

11  
12 DIRECT EXAMINATION

13 BY MR. BRUCE:

14 Q Mr. Caughey, would you please state your  
15 full name and city of residence?

16 A My name is Charles A. Caughey. I reside  
17 in Spring, Texas, which is a suburb of Houston.

18 Q And who are you employed by and in what  
19 occupation?

20 A I'm employed by the Louisiana Land and  
21 Exploration Company as a geologist.

22 Q And have you previously testified before  
23 the Division as a geologist?

24 A No, I have not.

25 Q Would you briefly state your educational

1 and work history?

2 A Yes, sir. I graduated in 1973 from the  
3 University of Texas at Austin with a Master of Arts degree  
4 granted through their Department of Geological Sciences.

5 Went to work for Conoco. Worked for  
6 Conoco in exploration research and exploration projects for  
7 five years.

8 Joined Inexco and am currently employed  
9 by Inexco as a subsidiary of LL&E as a geologist. I've  
10 worked as a geologist and as an exploration manager and  
11 over the last six years I've been involved directly in  
12 exploration in southeast New Mexico.

13 Q And are you familiar with the geological  
14 matters relating to this case?

15 A Yes, I am.

16 MR. BRUCE: Mr. Examiner, are  
17 the witness' credentials acceptable?

18 MR. STOGNER: Mr. Caughey,  
19 where did you do your stint with Conoco?

20 A Ponca City, Oklahoma, and Lafayette,  
21 Louisiana.

22 While in Ponca City I had my first ex-  
23 posure to New Mexico in the Bell Lake Field, but I really  
24 haven't worked it consistently except for about the last  
25 six and a half years.

1 MR. STOGNER: Thank you, Mr.  
2 Caughey. No -- Mr. Caughey's qualifications are so accept-  
3 ed.

4 Q Mr. Caughey, please refer to Exhibit  
5 Three and describe its contents.

6 A Exhibit Three is a production map for  
7 the Lovington area. It's a scale of one inch to 5000 feet.  
8 The Town of Lovington is prominently noted there for refer-  
9 ence and on this map the green color is Strawn production;  
10 the yellow color refers to production from all formations  
11 above the Strawn, and red refers to production from pay  
12 zones beneath the Strawn.

13 The area of specific interest to us  
14 right now is designated Benchmark Prospect, approximately a  
15 mile and a half to two miles southwest of Lovington. It is  
16 hachured green, indicating that it's prospective for the  
17 Strawn and the Strawn is the particular horizon that we're  
18 going to look at.

19 Q Would you please then refer to Exhibit  
20 Four, the cross section up on the wall, and discuss its  
21 contents for the Examiner?

22 A Certainly. Exhibit Four is a strati-  
23 graphic cross section that connects seven wells.

24 It starts with the Mesa No. 1 State Well  
25 in Section 14 of 16 South, 35 East, in the northeast

1 quarter of that section.

2 This well is a dry hole on the western  
3 flank of Shoe Bar Field, and I will call your attention to  
4 the Strawn lime interval. The section itself is hung on  
5 the base of the Strawn lime and the Strawn is this interval  
6 right here.

7 As we come up in the Shoe Bar you can  
8 see the interval expand and the limestone mound that  
9 produces from these two wells in the Shoe Bar. Production  
10 is associated with the central part of the mound. The  
11 mound then thins, the lime thins, into a couple of dry  
12 holes and you can see thickening toward our prospect area.  
13 This is the area that we consider prospective and we desire  
14 to drill a well right in the center of this inferred mound.  
15 If the mound is there and has this configuration, we have  
16 reason to believe there will be porosity in the center of  
17 it.

18 MR. STOGNER: Okay, the mound  
19 that you're referring to is between the Hobbs and the --  
20 what's that other well, the Chambers?

21 A Mesa No. 1 Chambers.

22 MR. STOGNER: And what's the  
23 other well?

24 A David Faskin No. 1 Hobbs.

25 Q Okay, and the two dry holes that you

1 referred to was the Lister No. 1 and the Barton No. 1?

2 A No, sir, and I misspoke, dry holes in  
3 the Strawn. The Mesa No. 1 Barton is a dry hole, period.  
4 The Mesa No. 1 Chambers is dry in the Strawn; however, they  
5 did make a well shallower in the Wolfcamp.

6 MR. STOGNER: And this  
7 particular zone thinned, as you mentioned, between the  
8 Lester -- Lister and the Barton?

9 A Yes, sir, it did. And then thickens  
10 from the Barton, across the Chambers towards our prospect.

11 MR. STOGNER: Okay. Sorry to  
12 interrupt you there, Mr. --

13 A On the other side we see a similar rela-  
14 tionship with a much thinner section in the Faskin No. 1  
15 Hobbs and continues thinning away from the prospect. We  
16 can see geologic inference for thickening in this area;  
17 however, as you can clearly see, you've got to have some  
18 other indication to make it this large. That other  
19 indication consists of geophysical data.

20 The well log that anchors the far end  
21 off on the eastern, actually southeastern end of the sec-  
22 tion is the Hanks No. 1 (unclear) State Well. It also is a  
23 Wolfcamp well, thin and tight in the Strawn, and it's in  
24 Section 20 of 16 South, 36 East.

25 Q What significance does the thickness of

1 the lime have?

2 A Over this area as shown by this cross  
3 section, also shown by other work in the area, production  
4 is confined to the thicker parts of limestone mounds, so we  
5 need to be in the thickest part of the Strawn interval in  
6 order to find production.

7 Q Thank you, Mr. Caughey. Would you  
8 please now refer to Exhibit Five and discuss its contents?

9 A Exhibit Five is an isopach of the Strawn  
10 lime. This is the interval that I just graced on the cross  
11 section. It's contoured on 50-foot contour intervals and  
12 it's based on both seismic and subsurface control. This is  
13 on a one inch to 1000-foot scale and the outline of the  
14 acreage block is shown here in yellow abutting the Town of  
15 Lovington again for reference.

16 The trace of the cross section that we  
17 just looked at is shown on this section in orange. All of  
18 the Strawn wells, Strawn penetrations on this map are  
19 circled for reference.

20 They are further color coded showing  
21 production in North Shoe Bar Strawn Field in Section 13 of  
22 16 South, 35 East, with the Strawn wells colored in green.

23 Other control in the Strawn is shown and  
24 it does show the overall thickening toward the prospect  
25 area that I described from the cross section.

1                   As we can see on this map, there is a  
2 thin but a very -- there is a Strawn thick, not a very  
3 marked one but a very definite one that corresponds to the  
4 Production in Shoe Bar Field.

5                   Based on the well control around our  
6 prospect and further enhancement by the seismic control  
7 that we see located on this map, we anticipate a similar  
8 feature with even greater thickness in the vicinity of the  
9 initial test well.

10                  It is important to find the center of  
11 these mounds in order to find maximum porosity and the  
12 proposed location falls at that location.

13                  It also is spotted on a seismic line so  
14 that we can have data right there to confirm the thickness  
15 at this location.

16                  Q           Would you please now move on to Exhibit  
17 Number Six?

18                  A           Exhibit Number Six is a structure map on  
19 the top of the Strawn horizon. This is significant because  
20 we are looking at homoclinal dip on the sub(unclear beneath  
21 the -- uniform in angle and uniform in value.

22                  Uniform eastward dip underneath the  
23 Strawn in any variation in this area is inferred to repre-  
24 sent a thickness change in the Strawn lime. Consequently,  
25 we're looking for structural noses that would accompany a

1 build-up of the Strawn lime of the type that we are looking  
2 for here.

3 In the vicinity of the proposed location  
4 we can see a definite nosing affect and the proposed loca-  
5 tion quite intentionally is right in the center of that,  
6 with the intention of finding the thickest part of the  
7 mound, the best chance of finding production.

8 Q In short, the proposed well is the opti-  
9 mum location for the well.

10 A That is our interpretation.

11 Q In your opinion will the granting of  
12 this application be in the interest of conservation, the  
13 prevention of waste, and the protection of correlative  
14 rights?

15 A Yes. The unorthodox location is neces-  
16 sary to enable to this well to produce its fair share of  
17 reserves and also to enhance the possibility of finding  
18 production at this location.

19 Q And were Exhibits Three through Six  
20 prepared by you or under your direction or prepared from  
21 data which you provided?

22 A That's correct. I prepared Exhibits  
23 Three through Five directly and I provided the geologic  
24 data that went into the preparation of Exhibit Six.

25 MR. BRUCE: Mr. Examiner, I



1 move the admission of Exhibits Three through Six.

2 MR. STOGNER: Exhibits Three  
3 through Six will be admitted into evidence.

4 MR. BRUCE: I have nothing  
5 further of the witness at this time.

6 MR. STOGNER: Neither do I.  
7 Are there any other questions of Mr. Caughey?

8 He may be excused.

9 Does anybody else have any-  
10 thing further in Case Number 9418?

11 The case will be taken under  
12 advisement.

13

14 (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 (Commission) 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. 9418  
heard by me on 12 June 1988.  
Michael E. Hogner, Examiner  
Oil Conservation Division  
8/12/88