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

7  
8 30 January 1985

9 EXAMINER HEARING

10 IN THE MATTER OF:

11 Application of Bison Petroleum CASE  
12 Corporation for an unorthodox 8465  
13 oil well location, Chaves County,  
14 New Mexico.

15 BEFORE: Michael E. Stogner, Examiner

16 TRANSCRIPT OF HEARING

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

18  
19 For the Oil Conservation Division: Jeff Taylor  
20 Attorney at Law  
21 Legal Counsel to the Division  
22 State Land Office Bldg.  
23 Santa Fe, New Mexico 87501

24 For the Applicant: W. Thomas Kellahin  
25 Attorney at Law  
Kellahin and Kellahin  
P. O. Box 2265  
Santa Fe, New Mexico 87501

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I N D E X

BRUCE O. BARTHEL

Direct Examination by Mr. Kellahin 3

E X H I B I T S

Bison Exhibit One, Plat 4

Bison Exhibit One-A, Structure Map 5

Bison Exhibit Two, Cross Section 7

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MR. STOGNER: Call now Case  
S465, which is the application of Bison Petroleum Corpora-  
tion for an unorthodox oil well location, Chaves County, New  
Mexico.

We will now call for appear-  
ances in this matter.

MR. KELLAHIN: If the Examiner  
please, I'm Tom Kellahin of Santa Fe, New Mexico, appearing  
on behalf of the applicant, and I have one witness to be  
sworn.

MR. STOGNER: Are there any  
other appearances?

If not, will you please stand  
at this time and raise your right hand?

(Witness sworn.)

BRUCE O. BARTHEL,  
being called as a witness and being duly sworn upon his  
oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you please state your name and oc-  
cupation?

A My name is Bruce O. Barthel and I'm a

1  
2 petroleum engineer and now President of Bison Petroleum Cor-  
3 poration.

4 Q Mr. Barthel, have you previously testi-  
5 fied as a petroleum engineer before the Oil Conservation Di-  
6 vision?

7 A Yes, I have.

8 Q And have you prepared certain exhibits  
9 and reviewed the information surrounding this application by  
10 Bison?

11 A Yes, I have.

12 MR. KELLAHIN: Mr. Examiner, we  
13 tender Mr. Barthel as an expert petroleum engineer.

14 MR. STOGNER: Mr. Barthel is so  
15 qualified.

16 Q Would you please refer to the ownership  
17 plat that we have marked as Exhibit Number One and identify  
18 for the Examiner that portion of Section 34 that's the sub-  
19 ject of this application?

20 A On the west half of Section 4 -- Section  
21 34, Bison Petroleum has the Walters B Lease in the northwest  
22 quarter and the Walters Lease in the southwest quarter.

23 Q The application proposes to do what, Mr.  
24 Barthel?

25 A We propose to drill Well No. B-1 as a  
Queen oil well. It is located off spot and unorthodox in  
that it is closer to -- or is not in the middle of a quarter  
quarter section, but it is a regular spacing to all lease-

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lines.

Q All right. This well is a Queen gas well in the Southeast Chaves Queen Gas Area Associated Pool?

A An oil well.

Q Yes, sir, it's an oil well in that pool?

A That's correct.

Q All right, sir, let's turn to what I've marked as Exhibit One-A, which is a structure map, and directing your attention to the red square, which is the 40-acre tract outlined on the exhibit, would you identify what that 40-acre tract is?

A Yes, sir. That 40-acre tract offsets Bison's Walters Federal No. 2 Well, which originally was a gas well. After it continued production it was -- the gas/oil ratio reduced and it was reclassified June 1 of 1983 to an oil well.

The west half initially initially composed a communitized area, 320 acres. Upon reclassification it was de-communitized and the northwest quarter now is a separate lease.

Q In the west half of 34 would you identify for us the wells that have penetrated or produced from this pool?

A Initially Well No. 1 was drilled in 1973, tested for gas and water, and was plugged and abandoned.

Well No. 2 was drilled in 1974, came in as a gas well, and continued to produce, has been a good

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producer.

Upon the de-communitization we looked for additional oil production and drilled Well No. 3. That was in 1983.

In drilling it had a good show of oil. We set pipe, perforated, and after fracing it was primarily water with a show of oil. This located an oil/water contact which was considerably further up-dip than what we had anticipated when we drilled the well.

Q Have you identified on the structure map the oil/water contact that you've just described?

A After having drilled Well No. 3, then we feel pretty confident that the gas/oil contact is located where we have there at roughly 1756 feet subsea, or plus 1756 feet.

The oil/water contact is approximately 1730 foot subsea, also.

Q Within the 40-acre tract, why are you not proposing to drill at a standard location?

A The Queen gas in this area is 70 percent nitrogen. A gas well is economic but not very lucrative. It is also a poorer way of using reservoir energy when there is an oil rim.

If we drilled on a -- the center of that quarter quarter, we would be almost at the gas/oil contact. Going down dip and locating where we have proposed, this is about the ideal position trying to recover the maximum

1  
2 amount of oil.

3 Q Is Bison the operator of the 40-acre  
4 tract immediately to the east of this 40-acre tract?

5 A No, they are not. Oh, to the east, yes,  
6 we are. Yes, that's correct.

7 Q And are the interests -- is this the same  
8 lease involved in both the proposed 40-acre tract and the  
9 one in which you are moving towards with this location?

10 A Yes, it is.

11 Q So you're not infringing upon anyone's  
12 correlative rights, neither a royalty owner nor working in-  
13 terest owner by moving to this location.

14 A That's correct.

15 Q And this location is a location that  
16 gives you the optimum place in this 40-acre tract in which  
17 to test for oil.

18 A That is correct.

19 Q Let's go to Exhibit Number Two and have  
20 you show us the cross section.

21 A Exhibit Two, we have -- we show an inset,  
22 a structure map which is identical, just shot-down from the  
23 one we showed previously.

24 On this cross section we have two logs of  
25 wells. These are Wells No. 2, the Bison Walters Federal No.  
2 and 3, which are shown with a short red line on that  
structure map.

The Well No. 2 on the left shows the per-

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forated interval in a little red box there; also identifies the gas/oil contact in blue and the water/oil contact in green.

On the right is the well we drilled a little over a year ago, Well No. 3. Once again it shows the location of the perforated interval. It shows that we split the oil/water contact and it does identify the gas/oil contact, also.

On this location we have approximately identified where the unorthodox location will occur and we show the anticipated production interval, that this would be appreciably above the oil/water contact but still would be in a safe area located, as best we could, between the two contacts for maximum production.

Q Were Exhibits One, One-A, and Two prepared or compiled under your direction?

A That's correct.

MR. KELLAHIN: If the Examiner please, we move the introduction of the three exhibits.

MR. STOGNER: Exhibits One through Three will be admitted into evidence.

MR. KELLAHIN: I'm sorry, that's One, One-A, and Two.

MR. STOGNER: I'm sorry --

MR. KELLAHIN: I said three exhibits but they're numbered --

MR. STOGNER: We'll change it.



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Anyway, they are admitted.

I have no further questions of  
this witness.

If there are no other questions  
of him, he may be excused.

Is there anything further in  
Case Number 8465 this morning?

MR. KELLAHIN: Not in this case.

MR. STOGNER: This afternoon.

MR. KELLAHIN: No, sir.

MR. STOGNER: If not, 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. 8465, heard by me on January 30, 1985.  
Michael E. Meyer, Examiner  
Oil Conservation Division