

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING)
CALLED BY THE OIL CONSERVATION)
DIVISION FOR THE PURPOSE OF)
CONSIDERING:) CASE NO. 10951

APPLICATION OF SEAGULL MIDCON INC.

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: Michael E. Stogner, Hearing Examiner

March 31, 1994

Santa Fe, New Mexico

This matter came on for hearing before the
Oil Conservation Division on March 31, 1994, at
Morgan Hall, State Land Office Building, 310 Old
Santa Fe Trail, Santa Fe, New Mexico, before Deborah
O'Bine, RPR, Certified Court Reporter No. 63, for the
State of New Mexico.

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March 31, 1994
 Examiner Hearing
 CASE NO. 10951

PAGE

APPEARANCES

2

THORNTON OPERATION CORPORATION'S WITNESS:

ROBERT THORNTON

Examination by Mr. Carr

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Examination by Examiner Stogner

11

REPORTER'S CERTIFICATE

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E X H I B I T S

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Exhibit 1

5 11

Exhibit 2

7 11

Exhibit 3

9 11

A P P E A R A N C E S

FOR THE DIVISION:

RAND L. CARROLL, ESQ.

General Counsel

Oil Conservation Commission

State Land Office Building

310 Old Santa Fe Trail

Santa Fe, New Mexico 87501

FOR THORNTON
 OPERATING
 CORPORATION:

CAMPBELL, CARR, BERGE &

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BY: WILLIAM F. CARR, ESQ.

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1 EXAMINER STOGNER: This hearing will come
2 to order again. I'll call next case, No. 10951.
3 It's the last one on page 2.

4 MR. CARROLL: The application of Seagull
5 Midcon Inc. for an unorthodox oil well location in
6 Chaves County, New Mexico.

7 EXAMINER STOGNER: Call for appearances.

8 MR. CARR: May it please the Examiner, my
9 name is William F. Carr with the Santa Fe law firm
10 Campbell, Carr, Berge & Sheridan. I represent
11 Thornton Operating Corporation, the successor
12 operator to Seagull Midcon Inc., and I have one
13 witness.

14 EXAMINER STOGNER: That's Thornton
15 Operating --

16 MR. CARR: Corporation.

17 EXAMINER STOGNER: Any other appearances?
18 Will the witness please stand to be sworn?

19 MR. CARR: Mr. Stogner, the witness has
20 been previously sworn, and his credentials as an
21 expert witness in petroleum geology and engineering
22 accepted in the first case presented today, and I
23 would request that the record reflect that Mr.
24 Thornton remains under oath, and his qualifications
25 are a matter of record.

1 EXAMINER STOGNER: Okay. That was Mr. --
2 what is your first name, Mr. Thornton?

3 MR. THORNTON: Robert.

4 EXAMINER STOGNER: Let the record show
5 that in Case 10949, Mr. Thornton was sworn in and his
6 credentials were accepted at that time.

7 ROBERT THORNTON,
8 the witness herein, after having been first duly
9 sworn upon his oath, was examined and testified as
10 follows:

11 EXAMINATION

12 BY MR. CARR:

13 Q. Would you state your full name for the
14 record, please.

15 A. Robert Thornton.

16 Q. Mr. Thornton, are you familiar with the
17 application filed in this case by Seagull Midcon
18 Inc.?

19 A. Yes, I am.

20 Q. Are you familiar with the area which is
21 the subject of this hearing?

22 A. Yes, I am.

23 Q. Initially, could you define what your
24 relationship is with Seagull Midcon, Inc.?

25 A. Yes. Seagull Midcon Inc. was the original

1 permitting operator for the Seagull Federal No. 1
2 Well, and Thornton Operating Corporation subsequently
3 took over or was the successor operator to Seagull
4 Midcon. We have filed a sundry notice with the Feds
5 and a C-104 with the state to that effect.

6 Q. Could you briefly state what you seek with
7 this application?

8 A. Okay. What we're seeking is an unorthodox
9 well location, which would be 2,428 feet from the
10 south line and 1,154 feet from the east line of
11 Section 6, in Township 13 South, Range 29 East,
12 Chaves County, New Mexico, for the drilling of the
13 Seagull Federal No. 1 Well to test the Devonian
14 formation.

15 Q. And you've prepared exhibits for
16 presentation here today?

17 A. That's correct, sir.

18 Q. Let's go to what has been marked Thornton
19 Exhibit No. 1. Identify and review this for Mr.
20 Stogner.

21 A. Okay. This is a land ownership map of the
22 particular area, the township that's in the southeast
23 corner of this where Section 6 is, and that township
24 is 13 South, 29 East. The orange dot represents our
25 proposed location. And the heavy outline around it

1 is seismic survey, 3D seismic survey that we ran in
2 the area. And the other dark lines that are across
3 here are the 2D seismic lines.

4 The yellow represents areas where the
5 Seagull-Thornton group owns the leasehold interests.
6 And, in particular, Section 6, the 480 acres that are
7 colored yellow in Section 6 are all under one federal
8 lease with common ownership.

9 Q. What acreage do you propose to dedicate to
10 the well?

11 A. We propose to dedicate Unit I, which is
12 the northeast of the southeast quarter of Section 6.

13 Q. What are the well location requirements
14 for Devonian wells in the area?

15 A. Typically, the standard is 330-foot
16 setbacks from the outer boundaries of the spacing
17 unit.

18 Q. How much does this proposed location
19 deviate from the nearest standard location?

20 A. It's at 2,428 from the south line, which
21 puts it 118 feet closer or too close to the north
22 line of that Unit I, and 1,154 feet from the east
23 line, which is 164 feet too close to the west line.

24 Q. So you're moving the well actually north
25 and west?

1 A. That's correct.

2 Q. And is the status of the ownership
3 northwest and northwest common?

4 A. Yes. There's identical ownership in all
5 three of the quarter quarter sections that are being
6 encroached upon. Identical ownership, royalties,
7 etc.

8 Q. Is there any operator to whom notice of
9 this application needed to be given pursuant to OCD
10 rules?

11 A. We do not feel so.

12 Q. Let's go to Exhibit No. 2. Could you
13 identify this for the examiner?

14 A. Exhibit 2 is a geologic structure map
15 prepared on the basis of our 3D seismic in the area,
16 3D seismic survey that we've run in the area.

17 The location is a red dot or, actually,
18 it's the dot inside the red dot. There is a bounding
19 fault to the northwest and to the southwest of our
20 feature that helps provide the structure. The dot to
21 the southeast of the dot would be the -- of the red
22 dot would be the closest standard location.

23 Q. Basically explain to us why you're
24 proposing a well at this particular location.

25 A. Typically, Devonian fields out in this

1 area are extremely highly permeable. They can be
2 drained by one well, and if that well is located on
3 the peak of the structure. We feel that by placing
4 it at the nonstandard location, which is the ideal
5 spot for the one well to drain the field, we gain
6 structural position.

7 Q. How much structural advantage do you
8 actually gain by moving from the blue dot, the
9 orthodox location, to the proposed nonstandard
10 location?

11 A. Between 3 and 4 milliseconds of two-way
12 travel time on the seismic. At the velocities of the
13 Devonian formation, as you see from the map, it would
14 move it from 1,164 two-way travel time up to
15 approximately 1,161 two-way travel time. Each
16 millisecond in there is approximately nine feet. So
17 that means that we'll be gaining between 27 and 37
18 feet of structure.

19 Q. Can you quantify the benefit you gain when
20 you gain this much additional structure?

21 A. Yes. Based on other reservoirs in the
22 area, each foot gained at the top of the reservoir
23 should increase the recovery by approximately 6,000
24 barrels of oil. Therefore, for 27 to 36 feet gain,
25 we're looking at 162,000 barrels to 216,000 barrels

1 of additional recoverable reserves that cannot be
2 drained from any other location.

3 Q. And you've stated that those numbers are
4 based on experience with other fields in the area.
5 Would you identify what is marked Thornton Exhibit
6 No. 3?

7 A. Exhibit No. 3 is a case reservoir map that
8 was prepared by an independent geologist, Keith
9 McKamey, with regard to several fields that are
10 within, oh, within a ten-mile area of the proposed
11 location.

12 Q. This was part of the seismic study that
13 was done on this reservoir; is that right?

14 A. This is a field case study that was done
15 around our seismic area that we were investigating.

16 Q. Review what this exhibit shows.

17 A. What this exhibit shows, just to take a
18 couple of cases, the White Ranch Field up there, it
19 has somewhat -- each square, each field that's shown
20 on here is drawn to the same scale.

21 The square that's approximately 2-1/2
22 inches by 2-1/2 inches in size is the section; so
23 it's a square mile. Like I say, they're all on the
24 same scale. You can tell from the White Ranch Field
25 that the field itself is probably on the order of 80

1 to let's say 100 acres in size, and that field has
2 produced over 600,000 barrels of oil.

3 And the North King Camp Field, which is
4 drawn to the east, is probably on the order of 200
5 acres in size, and that field, the estimated
6 recoverable reserves are over 1.6 million barrels.

7 The key to this, the one on the east, is
8 that the discovery well in the North King Camp Field,
9 which is the one to the east or to the right, would
10 have only recovered somewhere around 600,000 barrels
11 of oil because it wasn't drilled at the top of the
12 structure, whereas the well to the west, which was
13 drilled very near to the top of the structure,
14 allowed us to recover an extra million barrels.

15 Q. What generally is the reservoir drive
16 mechanism in these pools?

17 A. Typically, the Devonian out here has a
18 strong bottom water-drive.

19 Q. And these exhibits show that and confirm
20 that if you're going to effectively drain the
21 reservoir, you need to maximize your structural
22 position?

23 A. That's correct. They're almost all
24 structural fields.

25 Q. Mr. Thornton, in your opinion, will the

1 well at the proposed location recover reserves that
2 otherwise would be left in the ground?

3 A. Yes, sir.

4 Q. And that would thereby prevent waste?

5 A. That's true.

6 Q. Will approval of the application also be
7 in the best interests of conservation and the
8 protection of correlative rights?

9 A. We believe so.

10 Q. Were Exhibits 1 through 3 either prepared
11 by you or compiled under your direction?

12 A. Yes.

13 MR. CARR: At this time, Mr. Stogner, we
14 would move the admission of Thornton Exhibits 1
15 through 3.

16 EXAMINER STOGNER: Exhibits 1 through 3
17 will be admitted into evidence.

18 MR. CARR: That concludes my direct
19 examination of Mr. Thornton.

20 EXAMINATION

21 BY EXAMINER STOGNER:

22 Q. Mr. Thornton, looking at Exhibit No. 3, do
23 you know whenever the 3D seismic was run in these
24 particular instances that you've shown here, if some
25 of these wells were in existence to give some

1 viability to the 3D?

2 A. In actuality -- I hope I didn't imply that
3 -- these particular wells were developed off of 2D
4 seismic. Our particular well was developed off of
5 2D, and then we ran 3D on top of it to determine the
6 best location.

7 There was a seismic line that was drawn on
8 the North King Camp Field, a seismic line that was
9 run east-west crossing over those two wells that in
10 fact showed that the second well, the one on the west
11 that found the extra 60 feet of structural position,
12 it was determined by 2D seismic.

13 Q. In your particular instance, there's no
14 wells, and referring to Exhibit No. 1, there's no
15 existing wells where the 3D was ran or your 2D, for
16 that matter?

17 A. That's correct. The closest well that's
18 shown on this map is over here in the Section 9 under
19 the crosshatched area, and that was a dry hole to the
20 Devonian. It was also included within our 3D seismic
21 area. In fact, there's probably another location
22 near that well.

23 Q. You had mentioned typically these Devonian
24 oil formations or oil-producing areas had high
25 porosity?

1 A. High permeability.

2 Q. High permeability. And typically one well
3 could usually drain this type of structure?

4 A. Um-hm.

5 Q. So in this particular instance, it's your
6 feeling that waste would be prevented, allowing just
7 this one well in there, and it would also preclude
8 the drilling of additional wells or unneeded wells?

9 A. I can't think of a reason why we would
10 want to. I hate to close the door on that
11 possibility of ever drilling another well, but at the
12 current time, I can't see why we would ever want to.

13 For instance, talking about the
14 permeability, we recently drilled -- Hannigan was the
15 operator -- to the west of here, almost six miles due
16 west, and in that drill stem test on that formation,
17 Baker Tool, which ran the drill stem test, estimated
18 that the permeability was over 2 darcies. And that
19 during the three-hour test, it actually had a radius
20 of investigation during the test of three hours of
21 over 1,900 feet. It's extremely good permeability.

22 Q. This is essentially in the middle of one
23 federal lease, would preclude the possible violation
24 of correlative rights?

25 A. That's our opinion. It's common ownership

1 in each of the three, 40-acre spacing units that are
2 offsetting or being encroached upon by this well.
3 It's all under the same lease and the same royalty
4 owner, the same override owner, the same everything,
5 working interest owners.

6 Q. Fortunate in this instance.

7 A. We were very fortunate.

8 EXAMINER STOGNER: Any other questions of
9 Mr. Thornton?

10 MR. CARR: No, sir.

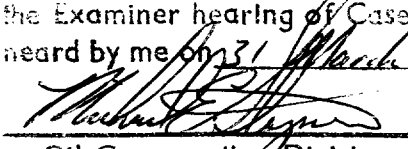
11 EXAMINER STOGNER: He may be excused.

12 Anything else, Mr. Carr?

13 MR. CARR: No, sir, Mr. Stogner.

14 EXAMINER STOGNER: Does anybody else have
15 anything further in Case No. 10951?

16 This case will be taken under advisement,
17 and hearing adjourned.

18 I do hereby certify that the foregoing is
19 a complete record of the proceedings in
20 the Examiner hearing of Case No. 10951,
21 heard by me on 31 March 1994.
22 , Examiner
23 Oil Conservation Division
24
25

1 CERTIFICATE OF REPORTER
2

3 STATE OF NEW MEXICO)

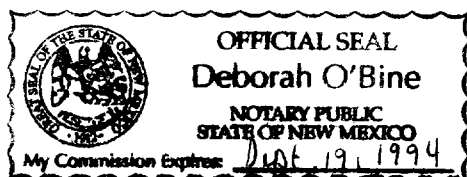
4) ss.

5 COUNTY OF SANTA FE)

6 I, Deborah O'Bine, Certified Shorthand
7 Reporter and Notary Public, HEREBY CERTIFY that I
8 caused my notes to be transcribed under my personal
9 supervision, and that the foregoing transcript is a
10 true and accurate record of the proceedings of said
11 hearing.

12 I FURTHER CERTIFY that I am not a relative
13 or employee of any of the parties or attorneys
14 involved in this matter and that I have no personal
15 interest in the final disposition of this matter.

16 WITNESS MY HAND AND SEAL, April 11, 1994.

17 
1819 DEBORAH O'BINE
20 CCR No. 63

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