

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:

APPLICATION OF RIDGEWAY ARIZONA OIL CORPORATION FOR COMPULSORY POOLING,
ROOSEVELT COUNTY, NEW MEXICO. CASE NO. 20507

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

June 27, 2019

Santa Fe, New Mexico

BEFORE: LEONARD LOWE, CHIEF EXAMINER
MICHAEL McMILLAN, TECHNICAL EXAMINER
DAVID K. BROOKS, LEGAL EXAMINER

This matter came on for hearing before the New Mexico Oil Conservation Division, Leonard Lowe, Chief Examiner; Michael McMillan, Technical Examiner; and David K. Brooks, Legal Examiner, on Thursday, June 27, 2019, at the New Mexico Energy, Minerals and Natural Resources Department, Wendell Chino Building, 1220 South St. Francis Drive, Porter Hall, Room 102, Santa Fe, New Mexico.

REPORTED BY: Mary C. Hankins, CCR, RPR
New Mexico CCR #20
Paul Baca Professional Court Reporters
500 4th Street, Northwest, Suite 105
Albuquerque, New Mexico 87102
(505) 843-9241

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APPEARANCES

FOR APPLICANT RIDGEWAY ARIZONA OIL CORPORATION:

DANA S. HARDY, ESQ.
GARY W. LARSON, ESQ.
HINKLE SHANOR, LLP
218 Montezuma Avenue
Santa Fe, New Mexico 87501
(505) 982-4554
dhardy@hinklelawfirm.com
glarson@hinklelawfirm.com

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1 (10:34 a.m.)

2 EXAMINER McMILLAN: It appears we have come
3 to the last case of the day, which would be Case Number
4 20507, Ridgeway Arizona Oil Corporation for compulsory
5 pooling of the Morrison San Andres Unit #942H well.

6 MS. HARDY: Good morning. Dana Hardy and
7 Gary Larson, with the Santa Fe office of Hinkle Shanor,
8 for the Applicant, Ridgeway Arizona Oil Corporation. I
9 have one witness, and I'll be presenting one affidavit.

10 EXAMINER LOWE: Okay.

11 EXAMINER McMILLAN: Make sure there is a
12 copy for Mr. Brooks.

13 MS. HARDY: Okay.

14 MR. LARSON: Mr. Lowe, would you like to
15 have our witness sworn in?

16 (Dr. Gruebel sworn.)

17 MS. HARDY: May I proceed?

18 EXAMINER LOWE: You may proceed.

19 MS. HARDY: Thank you.

20 Ridgeway's application seeks the pooling of
21 all uncommitted interests in the San Andres Formation in
22 a standard 240-acre horizontal spacing unit comprised of
23 the northeast quarter of the northwest quarter of
24 Section 16, the east half of the west half of Section 9
25 and the southeast quarter of the southwest quarter of

1 Section 4, Township 6 South, Range 34 East in Roosevelt
2 County. The horizontal spacing unit will be dedicated
3 to Ridgeway's Morrison San Andres Unit 942H well.

4 First I'll present the exhibit of the
5 landman. It's marked as Exhibit 1. It's a
6 self-affirmed statement of landman William Boyd. The
7 attachments to Mr. Boyd's affidavit include a C-102 for
8 the well, a sample well-proposal letter, a list of
9 uncommitted interests, notice of today's hearing, which
10 was given by mailing and publication, and an AFE for the
11 well.

12 Mr. Boyd states in his affidavit that there
13 are no depth exceptions in the San Andres Formation
14 underlying the horizontal spacing unit. Ridgeway is
15 requesting administrative rates of 6,000 a month and 600
16 a month, which are the same as the rates in Ridgeway's
17 JOA for the well. And finally, Ridgeway is requesting a
18 200 percent risk penalty.

19 With that, I would move the admission of
20 Ridgeway Exhibit 1.

21 EXAMINER LOWE: Exhibit 1 will be accepted.
22 (Ridgeway Arizona Oil Corporation Exhibit
23 Number 1 is offered and admitted into
24 evidence.)

25 MS. HARDY: Thank you.

1 Next I will call witness Marilyn Gruebel.

2 EXAMINER McMILLAN: I've got questions.
3 The first question is: If this is part of the Morrison
4 Unit, why are you compulsory pooling?

5 MR. LARSON: When the unit was formed --
6 Monzano formed the unit. They had 100 percent of the
7 state interest, 92 percent of the fee interest. So
8 there was some small uncommitted interests, and,
9 unfortunately, some of those interests are within the
10 proposed horizontal spacing unit. That's why we're
11 pooling them.

12 EXAMINER McMILLAN: But I thought when you
13 formed the unit, you consolidate the interests to the
14 unit. Therefore -- that's what I thought.

15 MR. LARSON: This is a voluntary unit.
16 It's not a -- it's not statutory units.

17 EXAMINER McMILLAN: Oh, okay. Okay. All
18 right. Yeah, because I think I heard the Morrison
19 Unit --

20 MR. LARSON: It sounds familiar to you?

21 EXAMINER McMILLAN: Yeah. I'll make
22 Leonard write the legal description.

23 (Laughter.)

24 EXAMINER McMILLAN: Okay.

25 EXAMINER LOWE: Okay.

1 MS. HARDY: May I proceed with Ms. Gruebel?

2 EXAMINER LOWE: Yes.

3 MS. HARDY: Thank you.

4 MARILYN GRUEBEL, Ph.D.,

5 after having been previously sworn under oath, was
6 questioned and testified as follows:

7 DIRECT EXAMINATION

8 BY MS. HARDY:

9 Q. Can you please state your full name?

10 A. My name is Marilyn Gruebel.

11 Q. Where do you reside?

12 A. Placitas, New Mexico.

13 Q. Have you been retained by Ridgeway Arizona Oil
14 Corporation as a consulting geologist?

15 A. I have.

16 Q. And are you familiar with the geological
17 aspects on the proposed Morrison San Andres Unit #942H
18 well and the matters addressed in Ridgeway's
19 application?

20 A. I am.

21 Q. Have you previously testified at a Division
22 hearing?

23 A. I have not.

24 Q. Given that, would you please summarize your
25 educational background and professional experience?

1 A. I have a Bachelor's Degree in Geology and Earth
2 Sciences from Stephen F. Austin State University, and I
3 have a Master's Degree in Geology from Texas A & M
4 University.

5 Early in my career, I worked as a staff
6 geologist for companies such as Marathon, SOHIO and
7 Enron. More recently, I have been a partner and a
8 consulting geologist for a company called Ralmar
9 Exploration, and that company started out doing vertical
10 well exploration in East Texas. We expanded to start
11 doing horizontal regional geology.

12 I have worked in the Marcellus. I've
13 worked in Eagle Ford, Bakken, Barnett and, more -- more
14 recently even than that, in the southeast New Mexico
15 Permian Basin.

16 I also have been a unit manager for the
17 State Land Office for a little over two years, looking
18 at the geology and the land aspects of forming units.

19 **Q. Do you hold a license as a professional**
20 **geologist?**

21 A. I am a registered professional geologist in the
22 state of Wyoming.

23 **Q. Do you have any professional certifications?**

24 A. I am a certified professional geologist with
25 the American Institute of Professional Geologists, and I

1 am a 40-year member of the American Association of
2 Petroleum Geologists.

3 MS. HARDY: Mr. Examiner, I tender
4 Ms. Gruebel as an expert petroleum geologist.

5 EXAMINER LOWE: She is so qualified.

6 Q. (BY MS. HARDY) Ms. Gruebel, can you please
7 identify the document in front of you that's marked as
8 Exhibit Number 2?

9 A. Exhibit 2 is a well locator map on the
10 left-hand side of the exhibit and a type log on the
11 right-hand side. The left-hand side map shows the
12 Morrison San Andres Unit 942H, the proposed well for
13 this unit, and it runs from Section 16, in 6 South, 34
14 East, northward to Section 4, in 6 South, 34 East.

15 The green circles on this map are wells
16 that have penetrated NRP 3 producers, and the wells with
17 the green circles are the wells that Ridgeway operates
18 within this area. The boundary on the -- the blue
19 boundary area is the area that Ridgeway owns acreage in.
20 And we'll focus in a little closer in another exhibit on
21 where the Morrison Unit exactly is.

22 On the right-hand side of this map is -- or
23 this exhibit is the type log for the area. This is
24 showing the P3 dolomite where the red is on the exhibit.
25 It is a dolomite overlain and underlain by an anhydrite.

1 Q. Did you prepare this map?

2 A. I prepared this map in conjunction with the
3 petroleum engineer for Ridgeway.

4 Q. And you stated that the location of the
5 proposed well is identified on the map?

6 A. Yes, it is.

7 Q. And you've stated, I think, that the proposed
8 well is located within the Morrison San Andres?

9 A. That is correct.

10 Q. Is there anything else that this map was
11 intended to depict?

12 A. Basically this is just a regional location map.

13 Q. Does the completed interval of the well comply
14 with the Division setback requirements?

15 A. It does.

16 Q. Thank you.

17 Will you please identify the document in
18 front of you that's marked as Ridgeway Exhibit 3?

19 A. Exhibit 3 is a regional structure map that was
20 mapped on the top of the San Andres P3 Dolomite.

21 Q. Did you prepare this exhibit?

22 A. I did, in conjunction with the petroleum
23 geologist -- or petroleum engineer -- excuse me -- for
24 Ridgeway.

25 Q. What role did this structure map have in your

1 **analysis of the prospects for the proposed well?**

2 A. This map indicates that in the vicinity of the
3 proposed well, we have a very gentle regional dip that
4 goes to the south-southeast, and it lies above sea
5 level. The zero-level contact is where the white is on
6 the map on kind of the south-southeast corner. The
7 oil-water contact in this area is just below that zero
8 line. So we have actually some wells that have
9 penetrated the P3 dolomite that are wet in the
10 south-southeast corner, and then as you move farther up
11 to the northwest, we are gaining structural altitude,
12 and we have wells that have actually shows in the P3 and
13 production.

14 **Q. Is a stand-up well the preferred orientation?**

15 A. It is.

16 **Q. Would you next identify the document in front
17 of you that's marked as Ridgeway Exhibit 4?**

18 A. Exhibit 4 is a regional PhiH isopach map of the
19 San Andres P3 Dolomite. PH in this -- or PhiH in this
20 instance is greater than 5 percent porosity times
21 thickness averaged every 2 feet over the P3 zone.

22 **Q. Did you prepare this exhibit?**

23 A. I prepared this exhibit in conjunction with the
24 petroleum engineer for Ridgeway.

25 **Q. Is this exhibit intended to depict anything**

1 **other than what you've already mentioned?**

2 A. This map actually shows the location of
3 Ridgeway's producers in the area from the P3 dolomite.
4 Brown Eyed Girl was the first well. It's down in the
5 lower left-hand corner, was the first well that is now
6 operated by Ridgeway. Tupelo Honey was the second well
7 drilled almost immediately after the Brown Eyed Girl.
8 Domino, which is just to the left center, is the third
9 well that was drilled, and then the proposed well is
10 just to the north of the Domino.

11 **Q. Can you please identify the document in front**
12 **of you that's marked as Ridgeway Exhibit 5?**

13 A. Exhibit 5 is a more specific look at the area
14 of the Morrison Unit. Here we see the Morrison Unit in
15 the black outline. This is, again, a PhiH isopach map
16 of the P3 dolomite, but it does zero in on the area that
17 we're interested in here. The proposed well would run
18 from Section 16 northward to Section 4, and the red
19 color here is essentially the highest PH -- PhiH that
20 we'll see in this area. So the well is proposed across
21 the highest PhiH. It should be the best well in the
22 area.

23 **Q. Did you prepare this exhibit?**

24 A. I prepared this exhibit in conjunction with the
25 petroleum engineer for Ridgeway.

1 **Q. Can you identify the final exhibit in front of**
2 **you, which is marked as Ridgeway Exhibit 6?**

3 A. Exhibit 6 is a cross section across the more
4 immediate area close to the proposed well. Well number
5 one starts in the southwest -- excuse me -- northwest
6 corner of the locator map below the cross section, and
7 it ends with number four, which is to the south on that
8 locator map.

9 The really interesting thing, in looking at
10 this cross section, is that wells numbers two and three
11 are about 700 feet to the west of the proposed well, and
12 these wells have had the best porosity, the best PhiH in
13 the area. The landing zone is shown with a red-dashed
14 arrow across wells two, three and four.

15 **Q. Did you prepare this document?**

16 A. I prepared this in conjunction with Ridgeway's
17 petroleum engineer.

18 **Q. Is the cross section representative of the**
19 **geology of the proposed horizontal spacing unit?**

20 A. We believe that this is very close to what we
21 should encounter in the well.

22 **Q. And what does the cross section tell you about**
23 **the target interval?**

24 A. The target interval should be somewhere between
25 12 and 15 PhiH, which means that we're looking probably

1 at about 85 to 100 feet of potential pay zone. And with
2 porosity, that's somewhere between 15, 16 percent.

3 Q. Are there any geologic impediments in the
4 target interval?

5 A. There are not.

6 Q. In your opinion, is each quarter-quarter
7 section in the proposed horizontal spacing unit expected
8 to contribute more or less equally to production?

9 A. Yes, it is.

10 Q. In your opinion, will the granting of
11 Ridgeway's application avoid the drilling of unnecessary
12 wells, protect correlative rights and serve the interest
13 of conservation and the prevention of waste?

14 A. Yes.

15 MS. HARDY: Mr. Examiner, I move the
16 admission of Exhibits 2 through 6.

17 EXAMINER LOWE: Exhibits 2 through 6 will
18 be admitted into the case.

19 (Ridgeway Arizona Oil Corporation Exhibit
20 Numbers 2 through 6 are offered and
21 admitted into evidence.)

22 EXAMINER LOWE: I've got a few questions.

23 CROSS-EXAMINATION

24 BY EXAMINER LOWE:

25 Q. That Phi -- describe Phi.

1 A. Okay. PhiH --

2 **Q. PhiH.**

3 A. -- on this map -- what we do is take, usually,
4 the compensated neutron curve on a log and figure out
5 what the porosity is. And in this case, greater than 5
6 percent porosity showing on that curve times the
7 thickness across the interval. So what we end up with,
8 we average it over every 2 feet for where we have
9 greater than 5 percent porosity. And so every 2 feet,
10 we take the porosity, and if it's greater than -- and if
11 the porosity is greater than 5 percent, then we use that
12 as the Phi for that interval, and then we average all
13 those intervals together.

14 **Q. Okay. And the Phi -- all this is based upon**
15 **that and references the dark red on the map?**

16 A. The dark red is the highest PhiH.

17 **Q. So right now you only have those -- when you**
18 **said Ridgeway took over the wells, were these wells**
19 **previously drilled or --**

20 A. These wells were drilled by Monzano, and
21 Monzano originated the unit. Ridgeway took over the
22 unit, so these wells also.

23 **Q. Okay. And you're referencing the four wells,**
24 **correct? That's Monzano?**

25 A. Right. There are four wells that show up here

1 as originally Monzano wells that went to Ridgeway. The
2 first one was Brown Eyed Girl, and it kind of moved to
3 the north on the map.

4 Q. Okay. Okay.

5 EXAMINER LOWE: Michael?

6 CROSS-EXAMINATION

7 BY EXAMINER McMILLAN:

8 Q. This is a good presentation.

9 I'm kind of curious. On Exhibit 6 --

10 A. Yes.

11 Q. -- what does the -- do you have any dual
12 laterologs on these?

13 A. We have laterologs for most of these. Yes.

14 Q. Okay. So do you see -- what's the difference
15 in the laterolog between the El Paso State #3 and the
16 OGR State 1 and 2? Have you looked at that? Do you see
17 any spread on the dual laterolog?

18 A. What's happening here is you're moving up on a
19 structure, and so we're thinning across the top --
20 across the structure somewhat.

21 Q. But do you see any difference -- what about the
22 dual lateral? Do you see spread in those, in the dual
23 laterolog? I'm just curious.

24 A. Spread?

25 Q. Do you see any separation in the dual laterolog

1 **in the P3 zone?**

2 A. No. And I have to say I need to go back and
3 take a look at that because --

4 **Q. I was just curious.**

5 A. Yeah.

6 **Q. Because San Andres is always scary to rely on
7 on C and DL porosity.**

8 A. That's why the experience in this area has
9 been -- they started out with wells that weren't --
10 drilling wells that weren't close to other wells that
11 they had been drilled, and they discovered that they had
12 some problems doing that. So now they're drilling --
13 the Domino and the proposed well are drilled very close
14 to wells that had good porosity and permeability -- or
15 good porosity.

16 **Q. Do you have any sonic porosities?**

17 A. No. These are all neutron or density logs.

18 **Q. Okay. Okay. Very nice presentation.**

19 A. Thank you.

20 EXAMINER LOWE: Yeah.

21 Okay. Thank you.

22 MS. HARDY: I have nothing further. We
23 would ask the case be taken under advisement.

24 EXAMINER LOWE: Okay. Case Number 20507
25 will be taken under advisement.

1 MS. HARDY: Thank you.

2 MR. LARSON: Thank you.

3 (Case Number 20507 concludes, 10:54 a.m.)

4 EXAMINER LOWE: That concludes our session
5 for today.

6 (Proceedings conclude, 10:54 a.m.)

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1 STATE OF NEW MEXICO
2 COUNTY OF BERNALILLO

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4 CERTIFICATE OF COURT REPORTER

5 I, MARY C. HANKINS, Certified Court
6 Reporter, New Mexico Certified Court Reporter No. 20,
7 and Registered Professional Reporter, do hereby certify
8 that I reported the foregoing proceedings in
9 stenographic shorthand and that the foregoing pages are
10 a true and correct transcript of those proceedings that
11 were reduced to printed form by me to the best of my
12 ability.

13 I FURTHER CERTIFY that the Reporter's
14 Record of the proceedings truly and accurately reflects
15 the exhibits, if any, offered by the respective parties.

16 I FURTHER CERTIFY that I am neither
17 employed by nor related to any of the parties or
18 attorneys in this case and that I have no interest in
19 the final disposition of this case.

20 DATED THIS 15th day of July 2019.

21

22

23 MARY C. HANKINS, CCR, RPR
24 Certified Court Reporter
New Mexico CCR No. 20
Date of CCR Expiration: 12/31/2019
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