

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

COPY

IN THE MATTER OF THE HEARING CALLED  
BY THE OIL CONSERVATION DIVISION FOR  
THE PURPOSE OF CONSIDERING:

APPLICATION OF CHI ENERGY, INC., CASE NO. 14353  
FOR APPROVAL OF A SECONDARY RECOVERY  
PROJECT AND TO QUALIFY THE PROJECT FOR THE  
RECOVERED OIL TAX RATE, EDDY COUNTY, NEW MEXICO

APPLICATION OF CHI ENERGY, INC., CASE NO. 14354  
FOR STATUTORY UNITIZATION, EDDY COUNTY,  
NEW MEXICO

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: RICHARD EZEANYIM, Presiding Examiner  
DAVID K. BROOKS, Legal Examiner

November 12, 2009

Santa Fe, New Mexico

This matter came on for hearing before the  
New Mexico Oil Conservation Division, RICHARD EZEANYIM,  
Presiding Examiner, and DAVID K. BROOKS, Legal Examiner,  
on Thursday, November 12, 2009, at the New Mexico Energy,  
Minerals and Natural Resources Department, 1220 South St.  
Francis Drive, Room 102, Santa Fe, New Mexico.

REPORTED BY: Jacqueline R. Lujan, CCR #91  
Paul Baca Professional Court Reporters  
500 Fourth Street, N.W., Suite 105  
Albuquerque, NM 87103 505-843-9241

1 will be continued after the -- rather than taken under  
2 advisement.

3 MR. EZEANYIM: Any objection?

4 MS. MACQUESTEN: No objection. May we be  
5 released?

6 MR. EZEANYIM: Yes

7 MS. MACQUESTEN: Thank you.

8 (A recess was taken.)

9 MR. EZEANYIM: We will go back into the  
10 record and continue these two cases.

11 MR. BRUCE: Mr. Examiner, I'm keeping Mr.  
12 Qualls up. He's the landman. I've handed you a set of  
13 land exhibits.

14 Q. (By Mr. Bruce) Mr. Qualls, briefly what does  
15 Chi seek in these two cases?

16 A. We are seeking to statutorily unitize all the  
17 interest in the portion of the Delaware formation  
18 underlying 560 acres of federal land in Case 14354. In  
19 Case 14353, we seek approval of a secondary recovery  
20 project for the unit and certification of the project for  
21 the Recovered Oil Tax Rate.

22 Q. What is the proposed unitized interval?

23 A. Unitized interval is the Brushy Canyon member  
24 of the Delaware formation underlying the unit area. The  
25 vertical limits are described as the stratigraphic

1 interval from 4,370 to 5,500 feet subsurface as shown on  
2 the density neutron log for the Munchkin Federal Well  
3 Number 9, located 990 from the north line, 300 from the  
4 east line of Section 11, 19 South, 30 East.

5 Q. Would you identify Exhibit 1 and describe it  
6 for the Examiner?

7 A. Exhibit 1 is a land plat which outlines the  
8 proposed unit area and identifies the separate tracts  
9 which comprise the unit area. Attached to the plat is a  
10 description of the entire unit area. There are seven  
11 tracts in the unit, and Chi operates all these tracts.

12 Q. Now, what is Exhibit 2?

13 A. Exhibit 2 is a proposed unit agreement. The  
14 unit agreement is a standard form used by the State Land  
15 Office modified to reflect that only federal lands are  
16 involved. It is similar to agreements approved  
17 previously by the Division. The unit agreement describes  
18 the unit area and unitized formation. Unitized <sup>Substances</sup> surfaces.  
19 include all oil and gas produced from the unitized  
20 formation. Designated unit operator is Chi Operating,  
21 Inc.

22 Q. What is Exhibit 3?

23 A. Exhibit 3 is a proposed unit operating  
24 agreement. It sets forth the authorities and duties of  
25 the unit operator, as well as the apportionment of

1 Q. Are you familiar with the geologic matters  
2 involved in these cases?

3 A. Yes.

4 MR. BRUCE: Mr. Examiner, I tender Mr.  
5 Shatzer as an expert petroleum geologist

6 MR. EZEANYIM: He is so qualified.

7 MR. BRUCE: Mr. Examiner, Mr. Shatzer has  
8 prepared a number of exhibits. I think it may be best if  
9 you kept Exhibit 13, the cross-section, in front of you  
10 as he's going through the first two exhibits.

11 MR. EZEANYIM: Number 13?

12 MR. BRUCE: Yes, the cross-section. As  
13 he's going through the first two exhibits, it may help  
14 for him to point out a few -- maybe also have Exhibits 11  
15 and 12, or at least Exhibit 11.

16 Q. (By Mr. Bruce) Anyway, Mr. Shatzer, starting  
17 with Exhibit 11 and comparing it to Exhibit 13, could you  
18 discuss those exhibits and the geology of this portion of  
19 the Delaware formation in this area?

20 A. Yes. Exhibit 11 is a Delaware structure map.  
21 It's based on the structure of a particular sand within  
22 the overall package that we have production. So I think  
23 probably the easiest thing would be for me to first refer  
24 to the producing interval that's on the cross-section,  
25 and that is -- this cross-section is a structural

1 cross-section, and we have three general intervals that  
2 are oil productive in this field, and the perforations in  
3 the given wells are either shown in red or in green.

4 And so, basically, there's a lower interval  
5 that's called the Munchkin Sand Interval. This was the  
6 interval we discovered first. Then there's a sand  
7 interval that's designated the Mike Sand Interval. It's  
8 in the middle portion. So some of the rest of that  
9 Delaware sand above and below the Mike Sand Interval is  
10 not productive. Then we have productive sands at the top  
11 ~~that~~ that are just below the base of the Delaware sand and—  
12 ~~the~~ conformity. So we have three intervals. If you're  
13 wondering, the blue markings on the side are the overall  
14 intended intervals where we want to inject water.  
15 Obviously injecting water into those intervals that are  
16 oil productive to sweep the oil.

17 Basically, our interval -- our producing  
18 interval really ranges from 4,500 to 5,100 feet  
19 subsurface, and we've asked for unitization slightly more  
20 than that to compensate for any structural things that  
21 might happen on future wells. But, basically, 4,500 to  
22 5,100 is the interval that we're talking about. For  
23 purposes of the structure map, that was a map that was  
24 done on the top of the Mike Sand Interval and that  
25 interval is shown in purple.

1 MR. EZEANYIM: What is the unitized  
2 interval? I thought Mr. Qualls mentioned the unitized --  
3 what is the unitized interval?

4 THE WITNESS: The unitized interval is  
5 slightly more than that, because we wanted to take into  
6 consideration if a well was extremely high or low. I'm  
7 saying that generally the production is between 4,500 and  
8 5,100. I think we asked for, what, 4,300 to 5,500?

9 MR. BRUCE: Mr. Examiner, in the unit  
10 agreement it's 4,370 to 5,500 feet, as found in the  
11 Munchkin Federal Number 9 Well.

12 MR. EZEANYIM: That's what everybody  
13 agreed to?

14 MR. BRUCE: Yes.

15 MR. EZEANYIM: But you mentioned 4,500 to  
16 5,100.

17 THE WITNESS: Generally, that's the  
18 general interval. That unitization interval was just  
19 made with a little bit of extra boundaries in case of  
20 differences in the wells we drilled.

21 Q. (By Mr. Bruce) Mr. Shatzer, I think maybe you  
22 did mention it, but you mentioned the Mike Sand and  
23 Munchkin Sandstone. Those are internal names; correct?

24 A. Yes. Those are internal names that we've  
25 used. The Delaware sandstone group is made up of a