

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
STATE LAND OFFICE BLDG.  
SANTA FE, NEW MEXICO  
3 January 1980

EXAMINER HEARING

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IN THE MATTER OF:	)	
	)	
	)	
Application of Harvey E. Yates Company	)	CASE
for a unit agreement, Lea County, New	)	6775
Mexico.	)	
	)	
and	)	
	)	
Application of Harvey E. Yates Company	)	CASE
for an unorthodox gas well location,	)	6776
Lea County, New Mexico.	)	
	)	

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BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation  
Division:

Ernest L. Padilla, Esq.  
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For the Applicant:

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## I N D E X

ANDREW LATTU

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MR. STAMETS: We'll call Case 6775.

MR. PADILLA: Application of Harvey E. Yates Company for a unit agreement, Lea County, New Mexico.

MR. STRAND: Mr. Examiner, I'm Robert Strand, attorney for Harvey E. Yates Company.

I would request that we consider Cases 6775 and 76 together. The geological evidence will relate to both.

MR. STAMETS: We will consolidate these cases for purposes of testimony.

Would you please call Case 6776?

MR. PADILLA: Application of Harvey E. Yates Company for an unorthodox gas well location, Lea County, New Mexico.

MR. STAMETS: Any other appearances in these cases?

MR. STRAND: Mr. Examiner, I have one witness, Mr. Lattu.

(Witness sworn.)

ANDREW LATTU

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

## DIRECT EXAMINATION

BY MR. STRAND:

Q. State your name, please.

A. Andrew Lattu.

Q. Mr. Lattu, who are you employed by?

A. I'm employed by Harvey E. Yates Company and work in Midland, Texas.

Q. In what capacity are you employed?

A. I'm a geologist.

Q. Mr. Lattu, have you testified before the Commission on previous occasions?

A. Yes, I have.

Q. Are your qualifications a matter of record?

A. Yes, they are.

MR. STRAND: Are Mr. Lattu's qualifications acceptable?

MR. STAMETS: They are.

Q. Mr. Lattu, would you state the purpose of the applications in Cases 6775 and 6776?

A. The purpose of the application is to form a unit and drill a well to test several formations, including the Morrow, in Lea County, New Mexico, Township 18 South, Range 32 East, and the unit will consist of approxi-

mately 2242.45 acres.

Q. Mr. Lattu, in Case Number 6776, are we then asking for an unorthodox location for the initial well to be drilled on that unit?

A. Yes. Yes, we are.

Q. What is the location of that proposed well?

A. The location of that well will be in the northwest northwest of Section 10, Township 18 South, Range 32 East; specifically it will be 660 from the north and west lines of Section 10.

Q. Mr. Lattu, with regard to the application for unit approval, would you state the exact lands which will be included within the unit?

A. Okay, this consists of, in Lea County, New Mexico, Township 18 South, Range 32 East, Section 3, Lots 1, 2, 3, and 4; the south half of the north half and south half of Section 3; the south half of Section 4; and all of Section 9 and 10.

MR. STAMETS: It's everything on Exhibit One except the north half of Section 4?

A. Pardon me?

MR. STAMETS: The unit consists of everything on Exhibit One except the north half of Section 4?

A. Yes, that's correct.

Q. Mr. Lattu, what depth limitations are applicable to the proposed unitized area?

A. The unitized area consists of between the top of the San Andres formation, which at the drillsite is anticipated at approximately 5000 feet from the surface, to 100 -- the stratigraphic equivalent of 100 feet below the deepest depth reached by the first well.

MR. STRAND: Mr. Examiner, I might state for the record that the application was filed on the basis of depth limitation from 5000 feet to all depths, and I would ask that the application be amended to conform with the depth limitations as stated by Mr. Lattu.

MR. STAMETS: Okay, would you run those past me again, please?

A. That would be from the top of the San Andres formation to a stratigraphic equivalent of 100 feet below the TD of the first well.

Q. What do you anticipate the total depth for that initial well will be?

A. It would be 12,900 feet.

MR. STAMETS: That is contained in the language of the unit agreement, is it not?

MR. STRAND: Yes, it is, Mr. Examiner, we have attached as Exhibit A, I believe, to the application,

a copy of the unit agreement, and the change in depth limitations are requested partially by the USGS and some of the participants in the unit, and it will be amended accordingly.

MR. STAMETS: Okay, that, the depth, is not advertised, so I really don't see that that's an amendment to your application, at least it's no problem.

MR. STRAND: Fine.

MR. STAMETS: As far as we're concerned.

Q. Mr. Lattu, what is the mineral ownership status of the lands included in the unit?

A. It is all Federal acreage.

Q. Referring to Exhibit Number One, would you please describe that?

A. Exhibit Number One is a land plat showing the proposed unit area, township and range indicated. Sections and unit outline is also indicated on this.

Q. Is that also Exhibit A to the proposed unit agreement?

A. Yes, it is.

Q. Directing your attention to Exhibit Number One-A, would you please describe that?

A. Exhibit Number One-A is a summary of the ownership of the proposed unit.

Q. And that is also Exhibit B to the unit agreement, is that correct?

A. Yes, it is.

Q. Mr. Lattu, have all of the working interest owners under the proposed unit agreed to join the unit?

A. Yes, they've all given a verbal agreement, subject to approval of an AFE, unitization agreement for them.

Q. Their verbal agreement is also subject to approval of an operating agreement?

A. Yes, that was what it was, the word I was looking for.

Q. Mr. Lattu, referring to Exhibit Number Two, would you please describe that?

A. Exhibit Number Two is a geologic structure map, contoured on the top of the Strawn. The unit outline is outlined in red. The proposed location is a red circle in the northwest corner of Section 10. Now, this shows a major fault in the Pennsylvanian with the up to the west, down to the east, which is the eastern boundary of the proposed unit. It also shows the outline of cross section A-A'.

The proposed location is not right on the crest of this feature. The Strawn in this area is a secondary objective of this prospect. The proposed location is based on the best location for our primary objective, which

I'll get to in a later exhibit.

Q. Referring to Exhibit Number Three, Mr. Lattu, is that the cross section you referred to?

A. Yes. Exhibit Number Three is a cross section A-A' indicated on Exhibit Number Two.

Q. Mr. Lattu, do you want to proceed with your explanation of the cross section?

A. If you look on Exhibit Two you can see the outline of this cross section. There isn't a lot of deep control right in the area of the proposed unit, so this cross section crosses this large fault here two times. This is the same fault. This is the well, the closest well to our proposed unit is on the up side of the fault, and as you look to the east and to the west you do cross the fault.

Now, the closest well which contains our primary objective, which is a bank of the scarp type deposit between the second and the third Bone Spring Sand, is the Sinclair well in Section 2. This well at depth is on the down side of this fault; however, by the time you come up to the top of the Wolfcamp and the Bone Springs Sands, this cross section is hung on a datum at the top of the Wolfcamp, or the base of the third Bone Springs Sand, which I pick as the top of the Wolfcamp in this area.

This well penetrated approximately 90 feet of crinoidal bank, which by log calculations is 47

percent water saturation. In other words, it would be wet and would not be -- and it had no shows in the samples.

The Trigg Federal, which is a well in Section 15 on the up side of the fault, did have a little bit of this crinoid bank, although, as can be seen on this log, the gamma ray is not as cleanly developed. The zone is present but there is no bank core found in that well.

Our proposed location is to -- I feel that when I get to the other map which is contoured on the shallow, that this bank more or less parallels the shelved basin, a facies change in this area, and that this bank will be developed in an east/west location.

I feel that the Sinclair well being on the down side of a fault at depth will also have a little drape over. In other words, it will be low to our proposed location, and the best location to test this bank is the northwest northwest of Section 10.

In addition to this, we also want to look at the Strawn zone which has had several good shows in the area and some production from the Strawn carbonate, and the Morrow Sands, which the only well nearby that penetrated it is down in Section 24.

Q. Mr. Lattu, referring to Exhibit Number Four, would you please describe that exhibit?

A. Well, Exhibit Number Four is a structure

map contoured on the top of the Queen formation. There is Queen production both to the northwest and the southwest of our proposed unit. The Queen formation, then, is the well or the deepest formation penetrated by the majority of the wells right in the immediate area.

Contouring on the top of the Queen, it shows a fairly prominent east/west, or slightly northeast/southwest trend in this area, a steep dip as you approach the shelf at the north end of the unit, and a considerable nosing or pullout, and I've contoured in a reversal through the unit. I feel this is a shallow structure reflecting the development of the crinoidal bank at depth.

Q. Mr. Lattu, with regard to the unit agreement, has an application been filed with the USGS for designation of this unit?

A. Yes, it has.

Q. Have they given their approval at this time?

A. They've given verbal approval, yes.

Q. Mr. Lattu, is it your opinion that the proposed unit area, as outlined in red on your Exhibits, covers all, or substantially all, of the geological feature you've described?

A. Yes, it does. As I said on the cross section, the primary objective here is this crinoidal bank

developed between the second and third Bone Springs. The secondary objectives consist of the Morrow and the Strawn formations.

Q. Is it further your opinion that development under the terms of the unit agreement will promote the efficient development, promote conservation and prevent waste?

A. Yes, it will.

Q. Mr. Lattu, with regard to the application for unorthodox location, is it your feeling that this is the most efficient location from a risk standpoint for this particular well?

A. Yes, it is.

Q. Is it your opinion that the granting of the application for unorthodox location will avoid the increase in risk and cost associated with drilling an excessive number of wells and also promote conservation and prevent waste?

A. Yes, it will.

MR. STRAND: I believe that's all I have, Mr. Examiner.

MR. STAMETS: Are there any questions of the witness? He may be excused.

Anything further in this case?

The case will be taken under advisement.

## REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Certified Shorthand Reporter,  
DO HEREBY CERTIFY that the foregoing and attached 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 from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.  
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 6775 & 6776  
heard by me on 1-3 1980.  
Richard P. Starn, Examiner  
Oil Conservation Division