CASE 5623: AMOCO PRODUCTION CO. FOR SALT WATER DISPOSAL, EDDY COUNTY, NEW MEXICO

CASE NO.

5623

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 4, 1976

EXAMINER HEARING

IN THE MATTER OF:

Application of Amoco Production Company for salt water disposal, Eddy County, New Mexico. CASE 5623

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: William F. Carr, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: Guy Buell, Esq.
Legal Counsel for Amoco Production
P. O. Box 3092
Houston, Texas

I N D E X

EXHIBIT INDEX

MR. STAMETS: We will call next Case 5623.

MR. CARR: Case 5623, application of Amoco Production Company for salt water disposal, Eddy County, New Mexico.

MR. STAMETS: Call for appearances in this case.

MR. BUELL: For the applicant, Amoco Production Company, my name is Guy Buell.

MR. STAMETS: Will the witness please stand and be sworn?

(THEREUPON, the witness was duly sworn.)

JOHN C. HUNTER

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. BUELL:

Q. Mr. Hunter, for the record would you state your complete name, by whom you are employed, in what location and what capacity, please?

A. I'm John C. Hunter, I'm employed by Amoco Production Company in Houston as a Petroleum Engineer, Senior Grade.

Q. Mr. Hunter, you have testified at previous Commission hearings and your qualifications are a matter of public record, are they not?

A. Yes, sir.

Q. All right, sir, in connection with your testimony here today, would you look first at what has been identified as Amoco's Exhibit One and state for the record what that exhibit is, please?

A. Exhibit One is a map showing the boundaries of the Amoco operated Old Indian Draw unit, which encompasses the field limits for the Indian Draw-Delaware Pool.

Q. How is the boundary designated?

A. The boundary is designated with a red and white striped tape.

Q. All right, sir, what other data are reflected on that exhibit?

A. There are wells reflected on this exhibit and they are color coded as to their status. There are four wells along the western boundary, outside the boundary of the unit, which are designated by yellow dots. These are dry holes that were drilled to the Delaware. The wells inside the unit boundary, which are designated by green dots, are producing wells in the Delaware and Well No. 4, which is designated by a red dot, is our proposed salt water disposal well.

Q. For the record would you locate that well, please?

A. This well, Old Indian Draw Well No. 4, is nineteen hundred and eighty feet from the south line and six hundred and sixty feet from the east line of Section 18, Township 22 South, Range 28 East.

Q. All right, sir, the No. 4 Well, was it drilled to the Delaware and a completion attempt made?

A. Yes, it was completed in the Old Indian Draw Delaware sands on June 1st, 1975, perforating the interval thirty-three sixteen to twenty-six and acidizing for a potential of fifteen barrels of oil and sixty-four barrels of water on pump.

Q. What happened to it after potential?

A. The production declined rapidly and this zone was abandoned on August 27th, 1975.

Q. All right, sir, you said completion was attempted at thirty-three, sixteen to twenty-six feet perforations. What will be the perforated interval for the proposed salt water disposal?

A. Our proposed interval will be thirty-three, seventy-six to thirty-four hundred.

Q. That is much lower than the completion perforation?

A. That is correct.

Q. All right, sir, before we leave Exhibit One, it would appear that all of the producing wells are within the boundary of the Old Indian Draw Unit?

A. Yes, sir, that is true.

Q. Do you have any other comments on Exhibit One?

A. No, sir.

Q. Turn if you would, now, to what has been identified as Exhibit Two, what is that exhibit?

A. Exhibit Number Two is a wellbore sketch for the Old Indian Draw Well Number 4 as it will look after conversion to salt water disposal.

Q. Would you briefly state for the record the pertinent data that are shown on Exhibit Number Two?

A. First of all it shows that we have eight-and-five-eighths inch surface casing set at three hundred and eighty feet with cement circulated to the surface. It also shows that we have the producing casing at thirty-four, sixty-three and cemented back to surface. It shows the intervals that have been perforated in the well and which will be squeezed, the interval which I discussed a moment ago which was the initial interval perforated in this well at thirty-three, sixteen to twenty-six feet is still open. There is a bridge plug above it right now but this interval will be squeezed with one hundred sacks of cement and the upper intervals have been tested and are still open at twenty-four, seventy-six to twenty-four, eighty-one and twenty-four, ninety to twenty-five, oh, four will be squeezed with two hundred sacks of cement and then the interval thirty-three, seventy-six to thirty-four hundred feet will be perforated for the disposal zone. We will run two-and-three-eighths-inch plastic coated tubing and set a packer at thirty-three, fifty.

Q. All right, sir, any other remarks on Exhibit Two?

A. No, sir.

Q. Let's turn then, if you will, Mr. Hunter, to Exhibit Three, what is Exhibit Three?

A. Exhibit Number Three is a cross section which includes four of the wells shown on Exhibit Number One. Starting from west we've got the LaRue and Muncie Number 1 Hannifin, which was one of the dry holes and then we continue through two producing wells, the Number 6 and the Number 1 and finally on the eastern side of the cross section we have the Old Indian Draw Number 4, which is the well in question.

Q. All right, sir, also on the right-hand side of the exhibit is a little insert map that shows the trace of the cross section?

A. That's correct.

Q. All right, sir, what is the significance of the intervals that you have colored on here in yellow?

A. All of the intervals colored yellow on this cross section indicate that they are porous sands in the Delaware.

Q. All right, sir, I notice that you have two porous members in the upper portion of the exhibit and then two at the lower, are the two porous members on the upper portion of the exhibit very critical to this hearing?

A. No, sir.

Q. Our area of interest is actually in the lower?

A. Yes, sir, all of the producing wells in the Old Indian Draw Unit are completed in the yellow porous sand, which

is second from the bottom.

Q. All right, sir, now, let's go to the two at the bottom. Of those two, where is the production from the upper or the lower?

A. The production is just from the upper sand of those two.

Q. Of the lower two?

A. Of the lower two.

Q. Have there been any well tests in the lower to indicate what it might contain?

A. Only in the dry hole drilled by LaRue and Muncie on the western side here. They perforated a small interval there and swabbed a small amount of water.

Q. What do log correlations in other wells reveal about this lowermost member shown on this exhibit?

A. Indications are from the logs that we are separated from the main porous sand by about forty-five feet and in this forty-five feet we've got a couple of tight intervals. Furthermore we have core data showing that we have adequate permeability and porosity in the lower porous sand.

Q. Did the log reveal anything as to what that sand might contain, did it confirm the water that was tested on the dry hole to the west?

A. Yes, sir, we calculated very high water saturation and we would anticipate that any production from that sand

would be one hundred percent salt water.

Q. All right, sir, now, directing your attention to Well Nunber 4, the perforated intervals, which we propose to use to dispose of water as shown on the log of Well Number 4?

A. Yes, sir, it is. The interval thirty-three, seventy-six to thirty-four hundred is shown and it is the proposed interval.

Q. It is entirely into the lowermost of the lower two?

A. That is correct.

Q. Let me ask you this: Currently about how much water will be available daily for disposal?

A. Currently we are producing two hundred and thirty-three barrels of water a day from the five producing wells in the Unit, so that would be the amount of water at this time.

Q. All right, sir, and while this application is for salt water disposal into a formation productive of oil and gas, according to this geological interpretation it is going to be disposed of in a porous interval that is not in communication with the porous zone that produces oil and gas?

A. Yes, sir.

Q. All right, sir, in your opinion, do you feel that approval of this application will serve conservation in any way?

A. Yes, sir, it will. It will lower the cost of our salt water disposal. We are currently paying forty-six cents a barrel to have the salt water trucked away and this will reduce the cost two or three cents a barrel, I would imagine, and by reducing this cost we will be able to increase the economic limit in this field or lower it per well, so we will be able to produce more economically.

Q. Do you have anything else you care to add at this time, Mr. Hunter?

A. No, sir.

MR. BUELL: If it please the Examiner, that's all we have at this time. I would like to formally offer Amoco's Exhibits One through Three.

MR. STAMETS: Amoco's Exhibits One through Three will be admitted.

(THEREUPON, Amoco's Exhibits One through Three were admitted into evidence.)

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Hunter, why are you not putting the water back into the producing horizon, the same producing horizon?

A. We gave that some consideration, a pressure-maintenance project, some consideration, but the core data shows that we do have widely varying horizontal permeability

here and until we study this a bit more extensively we are hesitant to start injecting water into this formation because we are afraid of an early break through. This field is still in the development stages, we still have several more wells that we plan to complete and by doing this we hope to learn more about the reservoir and we may in the future consider a pressure-maintenance or waterflood project.

Q. What kind of pressure do you anticipate on the injection system?

A. It will be designed to handle up to eighteen hundred pounds but we don't have a bottom-hole pressure in this lower porous sand, we are not quite sure what pressures we will be going up against. We do know from an acid job that we performed in the main porous sand in the Number 4 Well, we had an instantaneous shut-in pressure of about eleven hundred pounds on that acid job, so we would anticipate that this will require pressure of at least eleven hundred pounds.

Q. Just looking at Exhibit Number Two, it would appear then that that eighteen hundred pounds then would give you a pressure gradient of more than a half a pound for each foot of depth?

A. Yes, sir, that would likely be close to one psi per foot, which we think would be more than adequate.

Q. I was just wondering with this being salt water if it would give you sufficient pressure at that depth to fracture

the cement or the pipe or fracture the formation?

A. It's hard to say. We will be injecting at the lowest pressure which we can inject it and we will be handling only a small volume of water at this time. It is possible the hydrostatic head will be enough to put it into the ground.

Q. Have you made any calculations of how wide an area of influence this injected water will have?

A. No, sir.

Q. I see some dry Delaware holes on the west side here of the Unit, do you anticipate that this injected water would have any effect on those wells?

A. No, sir, I wouldn't think so. This well, this Number 4 Well is out in the center of our Unit and is a pretty good distance from these dry holes.

Q. It looks like at least a mile across there?

A. A good mile from the closest.

Q. Did you check the plugging program on any of those wells?

A. No, sir, I haven't.

Q. Will your injection well be equipped with a pressure gauge or some sort of a leakage detection device at the surface?

A. Yes, sir, we will be monitoring the pressure in the casing tubing annulus with a pressure gauge.

Q. And will the annulus be loaded with an inhibited fluid?

A. Most likely so.

Q. And you will have a man in the field who will report any problems with the well, any leakage, any failures?

A. Yes, sir, it will be checked daily.

MR. STAMETS: Any other questions of the witness?

MR. BUELL: I have one, Mr. Examiner.

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BY MR. BUELL:

Q. Mr. Hunter, are not the wells, the dry holes to the immediate west of our Unit boundary, aren't they all fairly recently drilled wells?

A. Yes, sir.

Q. And all plugged and abandoned under the modern plugging and abandoning rules of this Commission?

A. They should be.

MR. BUELL: That's all, Mr. Examiner.

MR. STAMETS: One additional question. If Amoco were limited to a surface pressure of no more than a half a pound per foot of depth, do you think that would give you any trouble on this well?

THE WITNESS: That might not be sufficient.

MR. BUELL: We really wouldn't know until we tried it, Mr. Examiner.

MR. STAMETS: Any other questions of the witness?

He may be excused.

(THEREUPON, the witness was excused.)

MR. STAMETS: Anything further in this case? The case will be taken under advisement.

REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Sidney F. Morrish, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 5623, heard by me on 3-4, 1976.

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New Mexico Oil Conservation Commission

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Q. Will your injection well be equipped with a pressure gauge or some sort of a leakage detection device at the surface?

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Q. And all plugged and abandoned under the modern plugging and abandoning rules of this Commission?

A. They should be.

MR. BUELL: That's all, Mr. Examiner.

MR. STAMETS: One additional question. If Amoco were limited to a surface pressure of no more than a half a pound per foot of depth, do you think that would give you any trouble on this well?

THE WITNESS: That might not be sufficient.

MR. BUELL: We really wouldn't know until we tried it, Mr. Examiner.

MR. STAMETS: Any other questions of the witness?

He may be excused.

(THEREUPON, the witness was excused.)

MR. STAMETS: Anything further in this case? The case will be taken under advisement.

REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Sidney F. Morrish, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 5623, heard by me on 2-4 1976.

Richard L. Stamets, Examiner
New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO

STATE GEOLOGIST
EMERY C. ARNOLD

Re: CASE NO. 5623
ORDER NO. R-5165

Mr. Guy Buell
Attorney
Amoco Production Company
P. O. Box 3092
Houston, Texas 77001

Applicant:

Amoco Production Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 5623
Order No. R-5165

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR SALT WATER DISPOSAL,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 4, 1976, at Santa Fe, New Mexico, before Examiner, Richard L. Stamets.

NOW, on this 24th day of February, 1976, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Amoco Production Company, is the owner and operator of the Old Indian Draw Well No. 4, located in Unit I of Section 18, Township 22 South, Range 28 East, NMPM, Indian Draw-Delaware Pool, Eddy County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Lower Delaware formation, with injection into the perforated interval from approximately 3,376 feet to 3,400 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic lined tubing installed in a packer set at approximately 3350 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1700 psi unless a higher pressure should be approved by the Secretary-Director of the Commission.

(6) That the operator should notify the supervisor of the Artesia district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(7) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(8) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amoco Production Company, is hereby authorized to utilize its Old Indian Draw Well No. 4, located in Unit I of Section 18, Township 22 South, Range 28 East, NMPM, Indian Draw-Delaware Pool, Eddy County, New Mexico, to dispose of produced salt water into the Lower Delaware formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3350 feet, with injection into the perforated interval from approximately 3,376 feet to 3,400 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1700 psi.

(3) That the Secretary-Director of the Commission may administratively approve wellhead injection pressures greater than 1700 psi for good cause shown.

(4) That the operator shall notify the supervisor of the Artesia district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(5) That the operator shall immediately notify the supervisor of the Commission's Artesia district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(7) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman

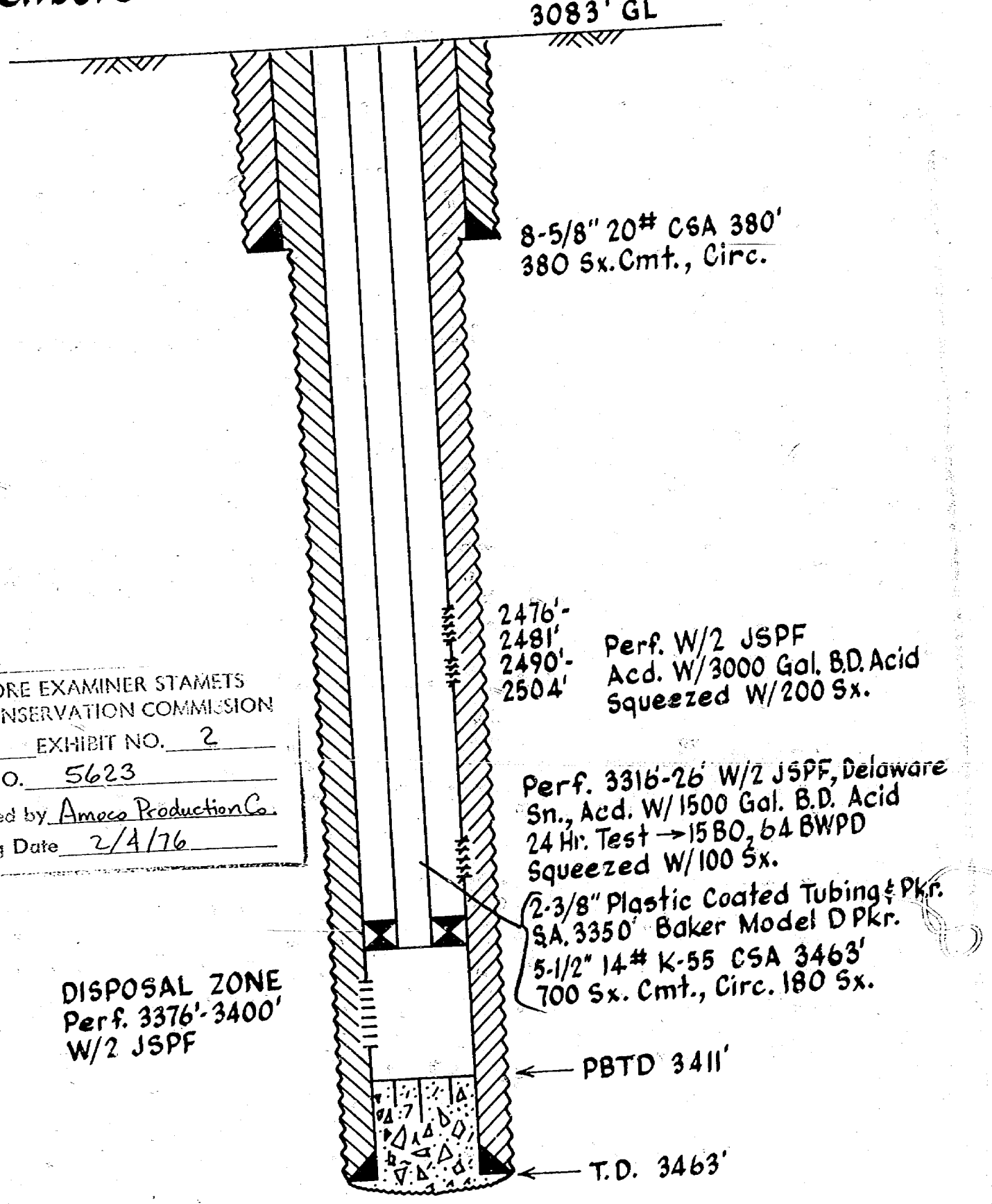
EMERY C. ARNOLD, Member

JOE D. RAMEY, Member & Secretary

S E A L

jr/

OLD INDIAN DRAW WELL NO. 4
Wellbore Sketch After Conversion To SWD



BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 5623
Submitted by Amoco Production Co.
Hearing Date 2/4/76

Dockets Nos. 6-76 and 7-76 are tentatively set for hearing on February 18 and March 3, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 4, 1976

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 5620: Application of Champlin Petroleum Company for a waterflood project, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Chaveroo-San Andres Pool by the injection of water into the San Andres formation through its Farrell Federal Well No. 4, located in Unit P of Section 30, Township 7 South, Range 33 East, Roosevelt County, New Mexico. Applicant further seeks an administrative procedure for approval of additional wells at standard and non-standard locations within the project area.

CASE 5397: (Reopened)

In the matter of Case 5397 being reopened pursuant to the provisions of Order No. R-4949, which order established the North Burton Flats-Wolfcamp Gas Pool, Eddy County, New Mexico, and promulgated special pool rules therefor, including a provision for 320-acre spacing and proration units. All interested parties may appear and show cause why said special pool rules should or should not remain in effect.

CASE 5621: Application of El Paso Natural Gas Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval to commingle Basin-Dakota and Blanco-Mesaverde gas production in the wellbore of its Jicarilla 119N Well No. 4, located in Unit H of Section 6, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.

CASE 5622: Application of Texaco for determination of charges and costs, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the determination by the Commission of reasonable well costs, and the applicability of the charge for risk to certain items of expense, for the William G. Ross A. Q. Rogers Well No. 1, located in Unit P of Section 3, Township 18 South, Range 26 East, Eddy County, New Mexico, to which is dedicated the E/2 of said Section 3, said lands having been pooled by Commission Order No. R-4980.

CASE 5623: Application of Amoco Production Company for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced water by injection into the Lower Delaware formation through the perforated interval from 3376 to 3400 feet in its Old Indian Draw Well No. 4, located in Unit I of Section 18, Township 22 South, Range 28 East, Indian Draw-Delaware Pool, Eddy County, New Mexico.

CASE 5624: Application of Harris & Walton for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced water into the Yates-Seven Rivers formation through the open-hole interval from 3507 feet to 3761 feet in its H. Whitten Well No. 1, located in Unit C of Section 4, Township 24 South, Range 36 East, Jalmat Pool, Lea County, New Mexico.

CASE 5625: Application of Walter W. Krug dba Wallen Production Co. for an exception to Order R-111-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the Potash-Oil Area casing-cementing rules for his Wallen Fee Well No. 1, located 330 feet from the North line and 990 feet from the West line of Section 28, Township 20 South, Range 34 East, Lea County, New Mexico, to permit completing said well with a shallow-cavings string cemented in and with 7-inch production casing to the top of the pay and a 4 1/2-inch liner through the pay, all cemented to the surface.

CASE 5626: Southeastern New Mexico nomenclature case calling for an order for the creation, abolishments, and extension of certain pools in Eddy and Lea Counties, New Mexico.

(a) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Strawn production and designated as the Carlsbad-Strawn Gas Pool. The discovery well is the Belco Petroleum Corporation Union Mead Com Well No. 1, located in Unit H of Section 8, Township 22 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 8: All
Section 17: N/2

(b) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the East Carlsbad-Morrow Gas Pool. The discovery well is the Champlin Petroleum Company Pecos Federal Well No. 1, located in Unit C of Section 1, Township 22 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 35: All
Section 36: W/2

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 1: N/2
Section 2: N/2

(c) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Strawn production and designated as the East Carlsbad-Strawn Gas Pool. The discovery well is the Champlin Petroleum Company Pecos Federal Well No. 1, located in Unit C of Section 1, Township 22 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 1: N/2

(d) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Strawn production and designated as the La Huerta-Strawn Gas Pool. The discovery well is the Cities Service Oil Company Tracy A Com Well No. 1, located in Unit C of Section 33, Township 21 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 33: N/2

(e) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Pennsylvanian production and designated as the Nonombre-Pennsylvanian Pool. Said pool would consolidate the vertical limits and acreage of the abolished Nonombre Lower-Pennsylvanian, Nonombre Middle-Pennsylvanian and the Nonombre Upper-Pennsylvanian Pools. New pool to be governed by the rules of the abolished Nonombre Lower-Pennsylvanian Pool under Order R-2929. Said pool would comprise:

TOWNSHIP 13 SOUTH, RANGE 34 EAST, NMPM
Section 32: All

(f) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Robinia Draw-Morrow Gas Pool. The discovery well is the American Quasar Petroleum Company of New Mexico Robinia Draw Unit Well No. 1, located in Unit K of Section 7, Township 23 South, Range 24 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 24 EAST, NMPM
Section 7: W/2

(g) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Pennsylvanian production and designated as the North Sanmal-Pennsylvanian Pool. The discovery well is the Dalco Oil Company Bell 17 State Well No. 1, located in Unit G of Section 17, Township 16 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 33 EAST, NMPM
Section 17: NE/4

(h) ABOLISH the Nonombre Lower Pennsylvanian Pool in Lea County, New Mexico, described as:

TOWNSHIP 13 SOUTH, RANGE 34 EAST, NMPM
Section 32: SW/4

(i) ABOLISH the Nonombre Middle-Pennsylvanian Pool in Lea County, New Mexico, described as:

TOWNSHIP 13 SOUTH, RANGE 34 EAST, NMPM
Section 32: E/2 NW/4 and W/2 NE/4

(j) ABOLISH the Nonombre Upper-Pennsylvanian Pool in Lea County, New Mexico, described as:

TOWNSHIP 13 SOUTH, RANGE 34 EAST, NMPM
Section 32: E/2 and SW/4

(k) EXTEND the North Benson Queen-Grayburg Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM
Section 32: S/2 NE/4 and NW/4 SW/4

(l) EXTEND the Burton Flat-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 26 EAST, NMPM
Section 12: S/2
Section 13: E/2

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 2: Lots 11, 12, 13, 14 & SW/4
Section 15, 16, 21, 22, & 28: All
Section 33: N/2

(m) EXTEND the Burton Flat-Strawn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 15: All

(n) EXTEND the South Carlsbad-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 3: N/2
Section 4: All
Section 5: E/2
Sections 8, 9, 17 & 18: All
Section 20: W/2

(o) EXTEND the Eagle Creek-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 25 EAST, NMPM
Section 13: N/2 NW/4

(p) EXTEND the Eumont Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
Section 33: NW/4 and SW/4 NE/4

(q) EXTEND the Los Medanos-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM
Section 6: E/2

(r) EXTEND the Lovington-Paddock Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM
Section 3: NW/4
Section 4: NE/4

(s) EXTEND the North Vacuum-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 36: SE/4

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 9: SE/4

(t) EXTEND the Vada-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM
Section 11: E/2

(u) EXTEND the Wantz-Granite Wash Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 14: NE/4

(v) CONTRACT the Indian Basin-Morrow Gas Pool in Eddy County, New Mexico, by the deletion of the following described lands:

TOWNSHIP 20 SOUTH, RANGE 25 EAST, NMPM
Sections 31 & 32: All

TOWNSHIP 21 SOUTH, RANGE 24 EAST, NMPM
Sections 4 & 5: All

(w) EXTEND the Cemetary-Morrow Gas Pool in Eddy County, New Mexico, to include the following described lands:

TOWNSHIP 20 SOUTH, RANGE 25 EAST, NMPM
Section 31: All
Section 32: W/2

TOWNSHIP 21 SOUTH, RANGE 24 EAST, NMPM
Sections 4 & 5: All

Case 5623

Ltr for hrg

Form C-108
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

RECEIVED
JAN - 9 1976
OIL CONSERVATION COMM.
Santa Fe

OPERATOR		ADDRESS	
AMOCO PRODUCTION COMPANY		BOX 367, ANDREWS, TEXAS 79714	
LEASE NAME	**WELL NO.**	**FIELD**	**COUNTY**
OLD INDIAN DRAW UNIT FED	4	INDIAN DRAW - DELAWARE	EDDY

LOCATION

UNIT LETTER I ; WELL IS LOCATED 1980 FEET FROM THE SOUTH LINE AND 660 FEET FROM THE EAST LINE, SECTION 18 TOWNSHIP 22-S RANGE 28-E NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	8 5/8"	380'	380	SURFACE	CIRCULATION
INTERMEDIATE					
LONG STRING	5 1/2"	3463'	700	SURFACE	CIRC. 185 Sx
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER: BAKER, MODEL AD-1 SET AT 3350'		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
LOWER DELAWARE	3370	3406

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
TUBING	PERFORATIONS	3376' - 3400'

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
NO	OIL	YES

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

2476-2504' Sqz. w/ 200 Sx 3316-26' Sqz w/ 100 Sx

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
300'	NONE	NONE

ANTICIPATED DAILY INJECTION VOLUME (BBLS.) MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
250	1500	CLOSED	PRESSURE	1800

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	YES	YES	NO

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Lessee - LAURENCE J. CALLEY, Box 883, CARLSBAD N.M.

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

NONE

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE ~~OWNER~~ Lessee	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
	YES	NONE	YES
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	**PLAT OF AREA**	**ELECTRICAL LOG**	**DIAGRAMMATIC SKETCH OF WELL**
	YES	YES	YES

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Roy R Yarbrum — (Signature)

ADMINISTRATIVE ASSISTANT — (Title)

JAN 7 1976 — (Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

C-42-NMOCC-SF
1-Div.
1-WF
1-PRY.
1-SUSP.
1-State Engr.
1-Lessee

Case 5623

SHEET NO. OF

FILE

APPN

DATE 7/31/75

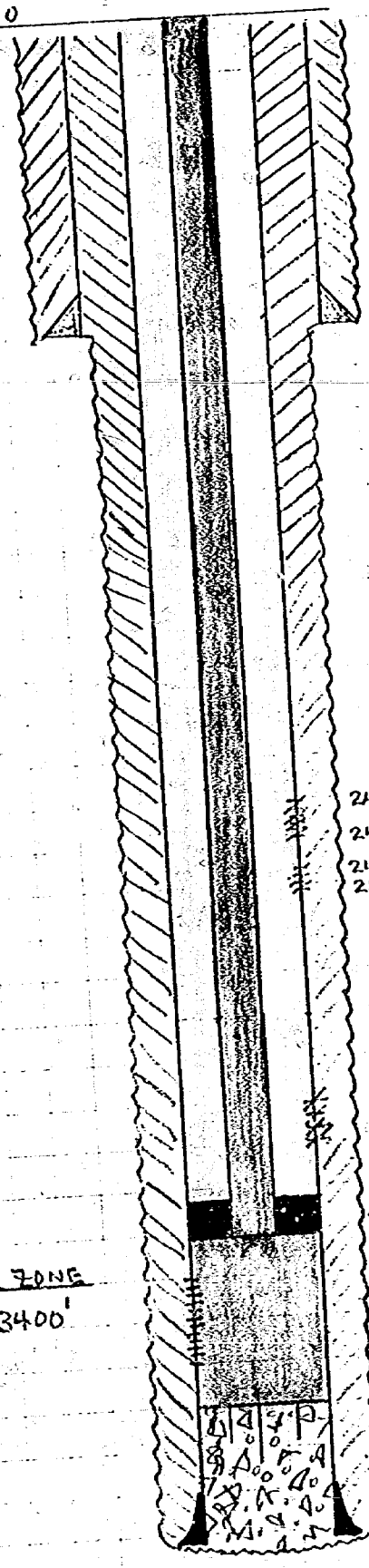
BY WLL

Amoco Production Compar..

ENGINEERING CHART

SUBJECT OLD INDIAN DRAW WELL #4

EDDY Co, NEW MEXICO



3083 GL

8 5/8" 20# CSA 380'
380 Sx cmt, circ

SQUEEZE
PERF W/2 JSPF
ACD W/3000 gal BD acid

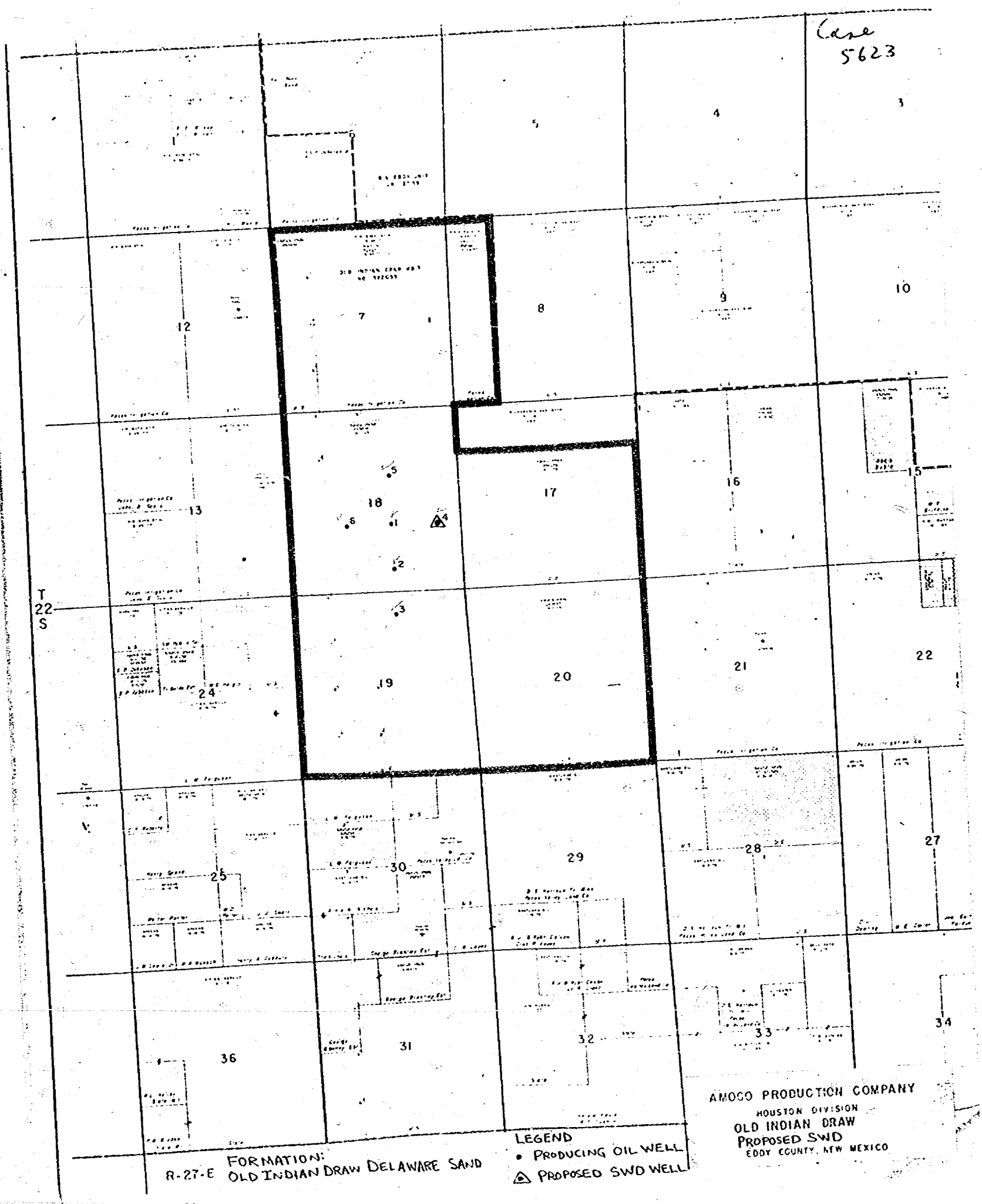
SQUEEZE
Perf 3316-26' W 2 JSPF, DELAWARE
SN, ACIDIZE WITH 1500 gal B.D. acid
24' TEST -> 15BO, 64 BWPD.

2 3/8" PLASTIC COATED TUBING + PKR SA 3360'

5 1/2" 14# K-55 CSA 3463'
700 Sx CMT, CIRC 180 Sx

ATT #3

Case 5623



FORMATION:
OLD INDIAN DRAW DELAWARE SAND

LEGEND
- PRODUCING OIL WELL
- PROPOSED SWD WELL

AMOCO PRODUCTION COMPANY
HOUSTON DIVISION
OLD INDIAN DRAW
PROPOSED SWD
EDDY COUNTY, NEW MEXICO

Form C-108
Revised 1-1-65

Case 5623

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR	ADDRESS
AMOCO PRODUCTION COMPANY	BOX 367, ANDREWS, TEXAS 79714

LEASE NAME	WELL NO.	FIELD	COUNTY
OLD INDIAN DRAW UNIT FED	4	INDIAN DRAW - DELAWARE	EDDY

LOCATION

UNIT LETTER I ; WELL IS LOCATED 1980 FEET FROM THE SOUTH LINE AND 660 FEET FROM THE EAST LINE, SECTION 18 TOWNSHIP 22-S RANGE 28-E NMPM.

CASING AND TUBING DATA

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INTERMEDIATE					
LONG STRING	5 1/2"	3463'	700	SURFACE	CIRC. 185 Sx
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER: BAKER, MODEL AD-1 SET AT 3350'		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
LOWER DELAWARE	3370	3406

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
TUBING	PERFORATIONS	3376' - 3400'

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
NO	OIL	YES

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

2476-2504' Sqz. w/ 200 Sx 3316-26' Sqz w/ 100 Sx

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250	1500	CLOSED	PRESSURE	1800

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	YES	YES	NO

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Lessee - LAURENCE J. CALLEY Box 883, CARLSBAD N.M.

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

NONE

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE ~~OWNER~~ Lessee	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
	YES	NONE	YES

ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	YES	YES	YES

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Roy Rogers (Signature) | ADMINISTRATIVE ASSISTANT (Title) | JAN 7 1976 (Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

cc: Nmoc-SF
1-DIV
1-WF
1-RRJ
1-SYSP
1-State Engr
1-Lessee

Case 5623

Amoco Production Compar..

ENGINEERING CHART

FILE

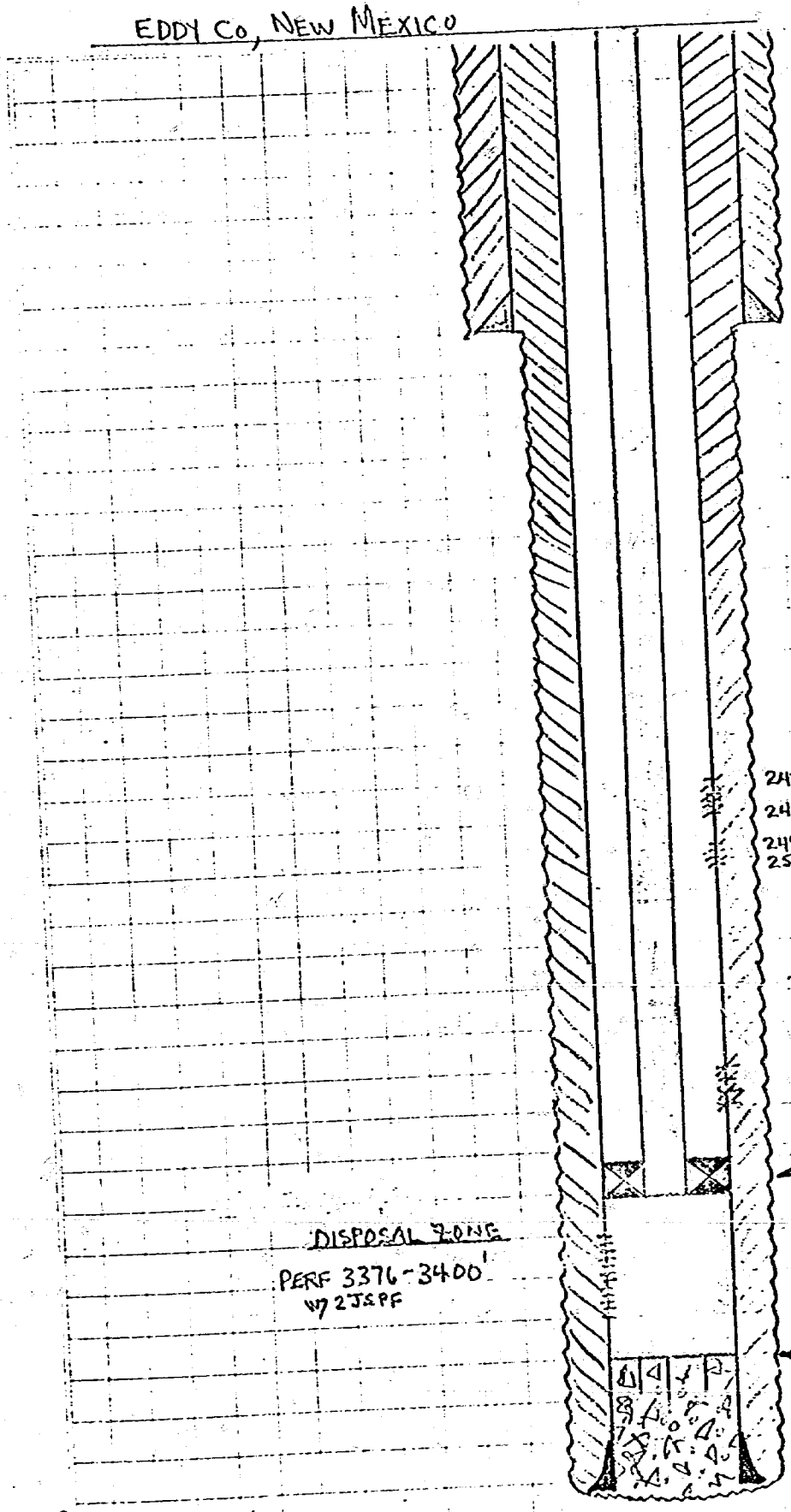
APPN

DATE 7/31/75

BY WLL

SUBJECT OLD INDIAN DRAW WELL #4

EDDY Co, NEW MEXICO



3083 G.L.

8 5/8" 20# CSA 380'
380 sx cmt, circ

SQUEEZE
PERF W/2 JSPF
ACD w/3000 gal BD acid

2476'
2481'
2490'
2504'

SQUEEZE
Perf 3316-26' w 2 JSPF, DELAWARE SN., ACIDIZE WITH 1500 gal B.D. acid
24 TEST → 1580, 64 BWPD.

2 3/8" PLASTIC COATED TUBING × PKR SA 3360'

5 1/2" 14# K-55 CSA 3463'
700 sx CMT, CIRC 180 sx

DISPOSAL ZONE
PERF 3376-3400'
W/ 2 JSPF

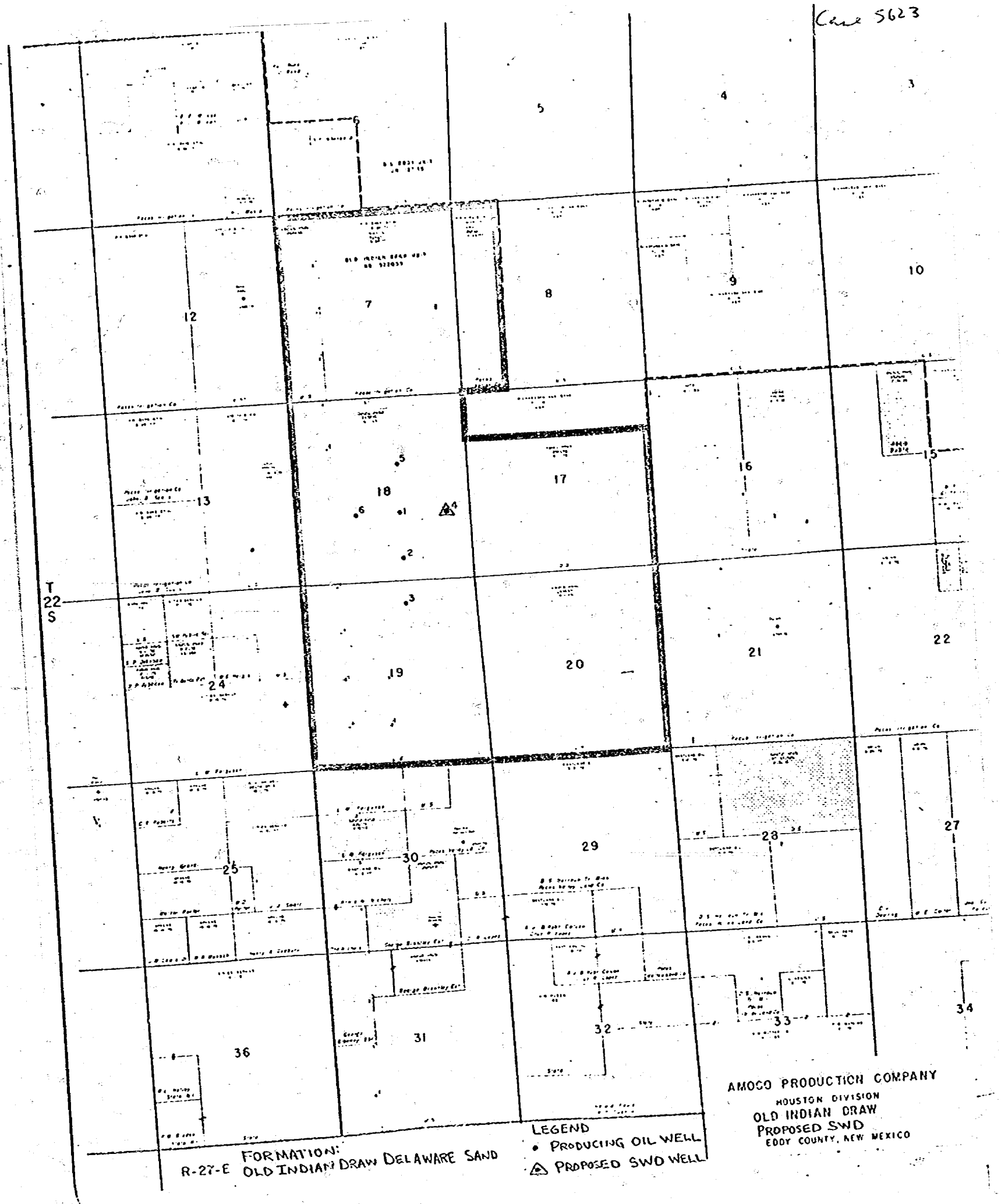
PBTD = 3411'

TD = 3463'

ATT #3

Form 371 2-71

Case 5623


T
22
S
R-27-E
FORMATION:
OLD INDIAN DRAW DELAWARE SAND
LEGEND
• PRODUCING OIL WELL
△ PROPOSED SWD WELL
AMOCO PRODUCTION COMPANY
HOUSTON DIVISION
OLD INDIAN DRAW
PROPOSED SWD
EDDY COUNTY, NEW MEXICO

Case 5623

BOREHOLE COMPENSATED SONIC LOG

Schlumberger

COUNTY	EDDY
FIELD or LOCATION	INDIAN DRAW DELA.
WELL	OLD INDIAN DRAW UNIT #4
COMPANY	AMOCO PROD. CO.

COMPANY AMOCO PRODUCTION COMPANY

WELL OLD INDIAN DRAW UNIT #4

FIELD INDIAN DRAW DELAWARE

COUNTY EDDY STATE NEW MEXICO

LOCATION: 1980' FSL, & 660' FEL,

Sec 18 Twp 22-S Rge 28-E

Other Services: FDC, DLL

Permanent Datum: G.L., Elev.: 3083

Log Measured From K.B., 13 Ft. Above Perm. Datum

Drilling Measured From K.B.

Elev.: K.B. 3096, D.F. 3095, G.L. 3083

Date	5-24-75			
Run No.	ONE			
Depth–Driller	3450			
Depth–Logger	3459			
Btm. Log Interval	3457			
Top Log Interval	2700			
Casing–Driller	8 5/8 @ 400	@	@	@
Casing–Logger				
Bit Size	7 7/8			
Type Fluid in Hole	SALT GEL			
Dens. / Visc.	10.3 / 32			
pH / Fluid Loss	8 / 27.5 ml	ml	ml	ml
Source of Sample	PIT			
Rm @ Meas. Temp.	.047 @ 70 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	.035 @ 70 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	.070 @ 70 °F	@ °F	@ °F	@ °F
Source: Rmf / Rmc	M / C			
Rm @ BHT	.035 @ 92 °F	@ °F	@ °F	@ °F
Circulation Stopped	2100 5-23			
Logger on Bottom				
Max. Rec. Temp.	92 °F	°F	°F	°F
Equip. / Location	7627 / HOBBS			
Recorded By	WILSON, LAKE			
Witnessed By	SMITH			

The well name, location and borehole reference data were furnished by the customer.

Run No.	ONE
Service Order No.	41121
Fluid Level	

EQUIPMENT DATA

Sonic Panel No.	485
Sonic Cart. No.	
Sonic Sonde No.	
Mem. Panel No.	573
G.R. Cart. No.	522
G.R. Panel No.	256
Caliper No.	
TTR No.	
Centralizers No. / Type	CHE-H VCD-D
Standoffs No. / Type	
Time Const.-Sec.	1
Speed-FPM	60

CALIBRATION DATA

GR	BKG. CPS	80
	Source CPS	520
	Tc Sec	CAL

SCALE CHANGES

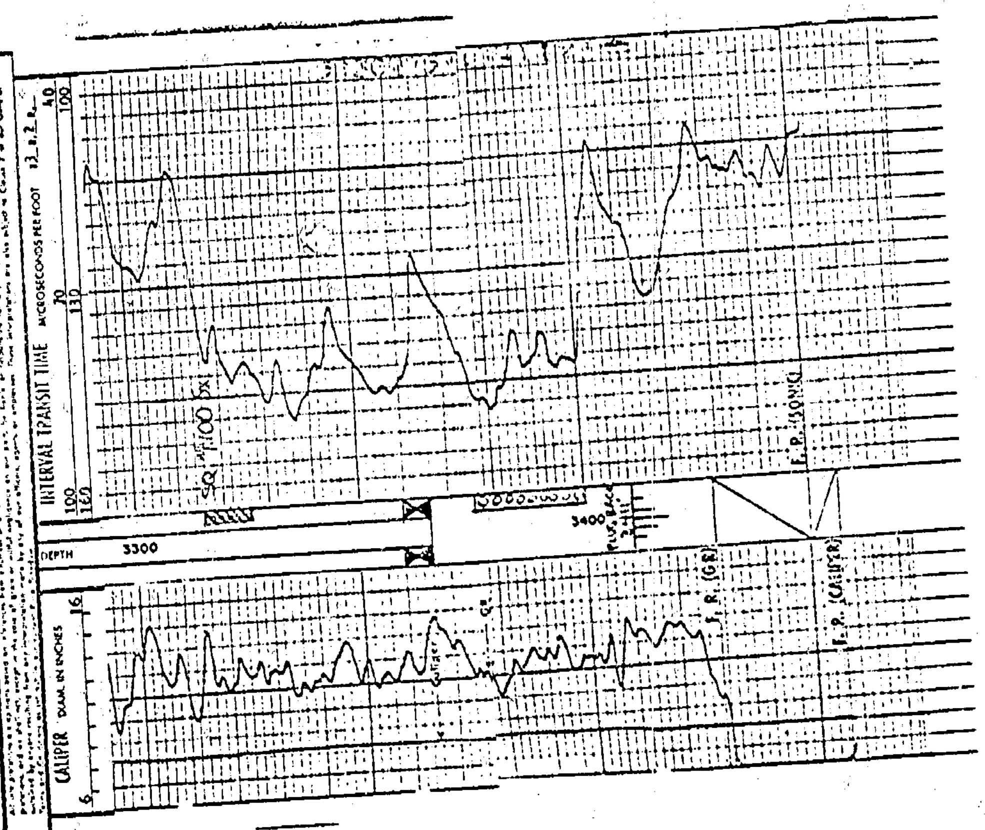
Type Log	Depth	Scale Up Hole	Scale Down Hole

LOGGING DATA

Δt_m	Δt_f	Cp	ρ Scale	From	To

REMARKS

Velocity (ft/sec) = 1,000,000 / Interval Transit Time (microseconds per foot)



ATWOOD, MALONE, MANN & COOTER
LAWYERS

JEFF D. ATWOOD [1883-1960]
ROSS L. MALONE [1910-1974]

CHARLES F. MALONE
RUSSELL D. MANN
PAUL A. COOTER
BOB F. TURNER
ROBERT A. JOHNSON
JOHN W. BASSETT
ROBERT E. SABIN
RUFUS E. THOMPSON

RALPH D. SHAMAS

P. O. DRAWER 700
SECURITY NATIONAL BANK BUILDING
ROSWELL, NEW MEXICO 88201
[505] 622-6221

January 26, 1976

Mr. Joe D. Ramey
Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico 87501

RE: No. 5623
Examiner Hearing for Wednesday,
February 4, 1976

Dear Mr. Ramey:

Would you please file the enclosed Entry of Appearance in the captioned case. The presentation will be handled by Guy Buell of Amoco's Houston office.

Appreciating your courtesy, and with our kind regards, I am,

Very truly yours,

Paul Cooter

PC:sas
Encl.
cc: Guy Buell, Esquire

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF AMOCO PRODUCTION COMPANY FOR SALT WATER DISPOSAL, EDDY COUNTY, NEW MEXICO.	))))	No. 5623

ENTRY OF APPEARANCE

The undersigned, Atwood, Malone, Mann & Cooter of Roswell, New Mexico, hereby enter their appearance herein on behalf of Amoco Production Company, with Guy Buell, Esquire, of Houston, Texas.

ATWOOD, MALONE, MANN & COOTER

BY _____

P. O. Drawer 700
Roswell, New Mexico

Attorneys for Amoco Production Company

DRAFT

dr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 5623

Order No. R- 5165

APPLICATION OF AMOCO PRODUCTION COMPANY
FOR SALT WATER DISPOSAL, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 4, 1976, at Santa Fe, New Mexico, before Examiner, Richard L. Stamets.

NOW, on this _____ day of February, 1976, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Amoco Production Company, is the owner and operator of the Old Indian Draw Well No. 4, located in Unit I of Section 18, Township 22 South, Range 28 East, NMPM, Indian Draw-Delaware Pool, Eddy County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Lower Delaware formation, with injection into the perforated interval from approximately 3,376 feet to 3,400 feet.

(4) That the injection should be accomplished through 2 3/8 _____-inch plastic lined tubing installed in a packer set at approximately 3350 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the

annulus in order to determine leakage in the casing, tubing, or packer.

(4) That the injection well or system should be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1700 psi, unless a higher pressure should be approved by the Secretary-Director of the Commission

(5) That the operator should notify the supervisor of the Artesia district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(6) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(7) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amoco Production Company, is hereby authorized to utilize its Old Indian Draw Well No. 4, located in Unit I of Section 18, Township 22 South, Range 28 East, NMPM, Indian Draw-Delaware Pool, Eddy County, New Mexico, to dispose of produced salt water into the Lower Delaware formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3350 feet, with injection into the perforated interval from approximately 3,376 feet to 3,400 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1,700 psi.

(4) That the operator shall notify the supervisor of the Artesia district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(5) That the operator shall immediately notify the supervisor of the Commission's Artesia district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(7) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year herein-above designated.

(3) That the Secretary - Director of the Commission administratively may approve wellhead injection pressures greater than 1,700 psi for good cause shown.