CASE 5627: J. R. CONE FOR DOWN-HOLE COMMINGLING, LEA COUNTY, NEW MEXICO

# CASE NO.

5627

APPlication,
Transcripts,
Small Exhibits,

ETC.

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico February 18, 1976

EXAMINER HEARING

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CASE 5627

IN THE MATTER OF:

Application of J. R. Cone for downhole ) commingling, Lea County, New Mexico.

BEFORE: Daniel S. Nutter, Examiner

#### TRANSCRIPT OF HEARING

#### APPEARANCES

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:

W. Thomas Kellahin, Esq. KELLAHIN & FOX Attorneys at Law 500 Don Gaspar Santa Fe, New Mexico

sid morrish reporting service

General Court Reporting Service
825 Calle Mejia, No. 1.22. Santa Fe, New Mexico 87501
Phon: (305) 982-9212

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MR. NUTTER: We will call Case Number 5627.

MR. CARR: Case 5627, application of J. R. Cone for downhole commingling, Lea County, New Mexico.

MR. KELLAHIN: Tom Kellahin of Kellahin and Fox, Santa Fe, appearing on behalf of the Applicant and I have one witness to be sworn.

(THEREUPON, the witness was duly sworn.)

#### L. O. STORM

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

#### DIRECT EXAMINATION

#### BY MR. KELLAHIN:

- Q. Please state your name and occupation?
- A. L. O. Storm, Engineer for J. R. Cone, Independent Oil Producer, Lubbock, Texas.
- Q Mr. Storm, have you previously testified before this Commission and had your qualifications as an expert witness accepted and made a matter of record?
  - A. I have.
- Q And are you familiar with the facts surrounding this particular application by J. R. Cone?
  - A Yes, sir.

MR. KELLAHIN: If the Examiner please, are the

Page\_\_\_\_4

witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q. (Mr. Kellahin continuing.) Mr. Storm, would you refer to what has been marked as Applicant Exhibit Number One and state briefly what the Applicant is seeking in this case?

- A. The Applicant is seeking approval for downhole commingling the Blinebry pools and the Drinkard pools in his Eubanks Well No. 3, located in Unit K of Section 14, Township 21 South, Range 37 East, Lea County.
- 0. Would you refer to Exhibit Two and identify the subject well?
- A. Exhibit Two is a plat of the area. The Eubanks lease constitutes the southwest quarter of the said Section 14 that I referred to earlier. Well No. 3 is located in the northeast forty acres of the lease.
- Q Is the ownership common in all of the horizons underlying the Eubanks lease?
  - A. Ownership of oil and gas under the lease is common.
- Q Please refer to what has been marked as Exhibit Number Three and identify it?
- A. Exhibit referred to by counsel is a schematic sketch of the downhole mechanical arrangement in the well.

  It is a little bit unique in that it involves three production retainers and a retrievable packer.
  - Q. Where have you experienced the downhole leakage?

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c C111	rface pressure and
A. The best I can tell from sur production measurements, it is in the	long or Drinkard tubing
production measurements, it is in the	
string between the top two packers.  We have had a similar fail	ure some years back in
had a stime	
We have have it was re	paired.
the same section of pipe. It was re	hanged in any manner in
will this completion be	downhole

- Will this completion be c order to produce it under an order approving downhole commingling?
- Only to the extent that I would propose opening of the sleeve, or the sliding sleeve valve, if you wish.
  - Where is that located?
- In the long tubing string located at an approximate depth of sixty-two, seventy-six feet.
  - Please refer to Exhibit Number Four and identify it?
- That is a C-116, Conservation Commission form, that presents the last reliable production tests of the Blinebry oil and gas in the Drinkard pools in the subject well prior to the indication of a downhole failure. 18
  - And Exhibit Number Five?
  - Exhibit Number Five is a production decline curve plotted from oil production data filed with the Commission on Form C-115's from the Drinkard and the Blinebry pools in said well, Number 3.
  - How would you propose to allocate the production 23 between the Blinebry and the Drinkard? 24 25

A	. On	the ba	sis of the	he tests	indicate	d on the	e C-116
that w	vould al	llocate	twenty-	five per	cent of t	he oil	to the
Bline	ory zone	e, eigh	ty-one p	ercent o	f the gas	to the	Drinkard
zone,	sevent	y-five	percent	of the o	il and ni	neteen	percent
of the	e gas.			a de la companya de l		e en	٠.

- Q. In your opinion, Mr. Storm, will the approval of this application result in the recovery of additional hydrocarbons from each of the commingled zones that otherwise would not be recovered?
- A. This I can't guarantee but I think it is entirely possible. I think conservation would be realized in the expenditure that the operator would not have to make to kill the well and repair it at this time.
- Q. Do you anticipate any negative effects from either of the producing formations from the proposed commingling?
- A. No, and I take this from what we have observed in the operations of the Eubanks Well No. 1 which had a similar downhole failure. It has been produced with downhole comminging under Conservation Commission Order DHC 117 and the well has been so produced since August of 1972.
  - Q Would you locate that Eubanks No. 1 Well, please?
- A It is located in the southwest forty acres of the lease, it is a southwest direct offset to the Eubanks No. 3, now in question.
  - And it is currently a downhole commingling of the

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Blinebry and Drinkard zones, is that right?

- A. Correct.
- Q In your opinion, Mr. Storm, will the approval of this application be in the best interests of conservation, the prevention of waste and the protection of correlative rights?
  - A. Yes, sir.
- Q Were Exhibits One through Five either prepared by you directly or under your direction and supervision?
- A. The entire application and all of the exhibits were prepared by me.

MR. KELLAHIN: If the Examiner please, we move the introduction of Exhibits One through Five.

MR. NUTTER: Exhibits One through Five will be admitted into evidence.

(THEREUPON, Applicant's Exhibits One through Five were admitted into evidence.)

MR. KELLAHIN: That concludes our direct examination

#### CROSS EXAMINATION

BY MR. NUTTER:

- Q. Mr. Storm, this is a one hundred and sixty acre lease, is that correct?
  - A. Yes, sir.
  - Q Now, referring to Exhibit Number Two would you

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identify what pool each of those four wells on the lease is completed in, please?

- At this point in time?
- Q.

Starting with Well No. 1, it's a dual completion in the Blinebry, what the Commission used to call Blinebry oil and the Drinkard pool. It has a downhole failure, it is produced as a downhole commingled Blinebry and Drinkard well.

Is that well classified as an oil well or a gas well as far as the Blinebry is concerned?

An oil well.

Well No. 2 is a dual completion or was affected as a dual completion in the Blinebry and the Tubb gas pools. The Blinebry oil gas ratio became in excess of thirty-two thousand to one under the old R-1670 order. Effective January 1, 1972 the Blinebry zone was shut in in the well and has remained shut in. It is produced as a single Tubb well. It is equipped with parallel strings of tubing.

Well No. 3 is equipped with parallel tubing strings to produce from the Drinkard and the Blinebry oil zones.

Well No. 4 was drilled as a dual, completed as a dual in the Drinkard and Blinebry oil pools and under Commission Order No. R-5064, dated last summer, I think it was in July, we entered the well to dually complete it from the Abo through one tubing string with downhole commingling of the

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Blinebry and Drinkard pools through the second tubing string. This was authorized under that order. We failed in that effort and the Abo is now cemented off in the well and it is equipped with a single tubing string to produce the Blinebry and the Drinkard through one tubing string.

- Q. So, with the four wells on the lease, you have two wells that are commingled in the Blinebry and the Drinkard?
- A. That are authorized under existing Commission orders too, two wells now so completed and we are requesting a third one be granted.
- O. I see. Now, Wells No. 1 and 4 are classified as oil wells in the Blinebry, what is Well No. 3 classified as?
  - A. By the Commission as a gas well.
  - Q. It has been reclassified as a gas well?
  - A. Yes.
- Q Okay, now, I notice here on Form C-116 that the well on test made five hundred and twenty-six MCF in a twenty-four hour period, is that well classified as a marginal or non-marginal well in the Blinebry?
- A. It will not make the assigned Blinebry gas allowable if this is the intent of your question.
  - Q I see.
  - A. It is marginal both as a liquid and as a gas well.
  - Q. I. see.
  - A. I would point out to the Commission that upon this

reclassifiction, effective January 1, 1972, both of the Eubanks Wells 2 and 3, in the north half of the lease, the ratios got out of hand and they were reclassified as gas wells. The No. 2 well was shut in and subsequently we applied to the Commission and obtained approval of an eighty acre nonstandard gas unit to be assigned in the Blinebry pool to Well No. 3, but the well will not make the current allowables assigned to Blinebry gas wells.

- Q. So since the Blinebry is shut in in that well, its acreage is dedicated to the well that is the subject of this hearing?
- A. Correct, but that's incidental, the well doesn't have the capacity to produce it.
- Q. Now, on your schematic you show another set of perforations up here at fifty-six forty-four to forty-six, are those perforations still open?
- A. To the best of my knowledge they are, Mr. Nutter, they are above a retrievable packer and isolated by that packer in a closed sleeve in the stub string. There is no means of entry in the long string, except by some kind of failure. But pressure performance of the well is identifiable only through the -- well, it suggests that a tubing failure in the long string between the Model K retrievable packer at fifty-six, seventy and above the FA production retainer at sixty-two, eighty-three.

- Q So how do those upper perforations produce, up through the annulus?
  - A. They are not produced, sir.
- Q. They would have to produce through the annulus with that setup?
- At one time when we first -- we got the permission in 1963 to dually complete -- we proposed to the Commission and subsequently the Commission approved that we open the Blinebry gas section and be permitted to produce it through a sliding sleeve valve into the Blinebry string up to a maximum gas-oil ratio of six thousand to one. A similar completion was authorized for Well No. 1. Both mechanical arrangements were unique at that point in time. It was our wish to obtain maximum legal gas from the Blinebry section because the oil zone was producing at the ratio of, say, a thousand to fifteen hundred to one. As soon as that ratio in that we'll passed six thousand, we closed that sleeve and those four perforations at fifty-six, forty-four to forty-six have been isolated since that time.
  - Q. And not produced at all?
  - A. Not to my knowledge.
- MR. NUTTER: Are there any further questions of the witness? He may be excused.

(THEREUPON, the witness was excused.)

MR. NUTTER: Do you have anything further,

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Mr. Kellahin?

MR. KELLAHIN: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Case 5627? We will take the case 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.

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I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 5627, neard by me, on 2/18, 1976 neard by me, on...

New Mexico Oil Conservation Commission

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## 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. 5627 Order No. R-5169

APPLICATION OF J. R. CONE FOR DOWNHOLE COMMINGLING, LEA COUNTY, NEW MEXICO.

#### ORDER OF THE COMMISSION

#### BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 18, 1976, at Santa Fe, New Mexico, before Examiner, Daniel S. Nutter.

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, J. R. Cone, is the owner and operator of the Eubanks Well No. 3, located in Unit K of Section 14, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico.
- (3) That the applicant seeks authority to commingle Blinebry and Drinkard oil and gas production within the wellbore of the above-described well.
- (4) That from the Blinebry zone, the subject well is capable of marginal production only.
- (5) That from the Drinkard zone, the subject well is capable of low marginal production only.
- (6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.
- (7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

-2-Case No. 5627 Order No. R-5169

- (8) That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Hobbs district office of the Commission any time the subject well is shut-in for 7 consecutive days.
- (9) That in order to allocate the commingled production to each of the commingled zones in the subject well, 25 percent of the commingled oil production and 81 percent of the commingled gas production should be allocated to the Blinebry zone, and 75 percent of the commingled oil production and 19 percent of the commingled gas production to the Drinkard zone.

#### IT IS THEREFORE ORDERED:

- (1) That the applicant, J. R. Cone, is hereby authorized to commingle Blinebry and Drinkard production within the well-bore of the Eubanks Well No. 3, located in Unit K of Section 14, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico.
- (2) That 25 percent of the commingled oil production and 81 percent of the commingled gas production shall be allocated to the Blinebry zone and 75 percent of the commingled oil production and 19 percent of the commingled gas production shall be allocated to the Drinkard zone.
- (3) That the operator of the subject well shall immediately notify the Commission's Hobbs district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.
- (4) 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.

SEAL

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman

EMERY C. KRNOLD, Member

JOE D. RAMEY, Member & Secretary

dr/

OIL COMETRYATION COMMISSION

CONE EXHIEN NO.

CÂSE NO.

RESIDENCE PHONE SHERWOOD 4-8173

#### J. R. CONE

-- 1423 NORTH AVENUE P P. O. BOX 871

LUBBOCK, TEXAS 79408

January 22, 1976 BEFORE EXAMINER NUTTER

Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey, Secretary-Director

Re: Application for Administrative Approval, Down-Hole and Surface Commingling, J. R. Cone Eubanks No. 3, Blinebry Oil & Gas and Drinkard Pools, Unit K, Section 14, T-21-S, R-37-E, Lea Co., NM.

Dear Mr. Ramey:

J. R. Cone herewith makes application for administrative approval of down-hole and surface commingling of the Blinebry Oil & Gas and Drinkard Pools in his Eubanks Well No. 3. The said well is located 1980 feet from the South line and 1830 feet from the West line, Unit K, Section 14, T-21-S, 37-E, NMPM, Lea County, New Mexico.

In support of this application the following attachments are appended hereto:

- 1. Area plat showing location of the subject well and lease;
- 2. Diagrammatic sketch showing the present down-hole mechanical arrangement in Eubanks No. 3;
- 3. NMOCC Form C-116 which presents the most recont well test data of the Blinebry Oil & Gas and the Drinkard zones;
  - 4. Production decline curves of the two producing zones; and,
- 5. A list of all offset operators to the Eubanks lease each of whom has been furnished a copy of this application.

Ownership is common as to all hydrocarbons underlying the Eubanks lease.

Originally Eubanks No. 3 was completed in December 1952 in the Wantz Abo Pool from the open-hole interval 6852 to 7342 feet. In December 1953 the well was recompleted in the Drinkard Pool via casing perforations 6544 to 6636 feet.

Next, Eubanks No. 3 was recompleted in March 1963 as a Blinebry oil over Drinkard oil dual utilizing two strings of 2-1/16-inch tubing under NMOCC Order No. R-2451. This recompletion was unique in that the upper Drinkard, the Blinebry Gas, and the Blinebry Oil zones all were opened then separated by packers and sliding sleeve valves to permit controlled entry of gas from Page 2: J. R. Cone down-hole and surface commingling application, Eubanks Well No. 3:

the Blinebry gas section within the limitations of the Blinebry Oil Pool legal gas limit. The sliding sleeve valve in the stub Blinebry Oil tubing string opposite the Blinebry gas section has been closed since November 1963 in compliance with the COR stipulations of Order No. R-2451.

Effective January 1, 1972 the Blinebry side of Eubanks No. 3 was reclassified by the NMOCC as a gas well because of excessive gas-oil ratio. Although marginal in both oil and gas capacity the well has been produced since then in compliance with the reclassification.

In August 1969 repair operations were conducted to correct down-hole communication via a hole in the Drinkard (long) tubing string at a depth of 5757 feet between the Baker model K retrievable packer which serves to isolate the Blinebry Gas zone and the FA production retainer which separates the Blinebry Oil and Drinkard zones. Surface pressure and production tests indicate that a similar down-hole fairure now exists in the well.

The attached NMCCC Form C-116 presents the last well tests prior to observance of probable down-hole communication. Should this application be approved, it is suggested that the commingled oil and gas production be allocated to the respective zones on the basis of those tests as follows:

Blinebry: Oil 25 percent; gas 81 percent. Drinkard: Oil 75 percent; gas 19 percent.

No incompatibility problems are expected from the proposed down-hole commingling. The southwest offsetting J. R. Cone Eubanks No. 1 has been produced since August 1972 under NMOCC Order No. DHC-117 with down-hole commingling of the Blinebry and Drinkard zones with no evident negative consequences. In addition, the south offsetting J. R. Cone Eubanks No. 4 has been recompleted recently for down-hole commingling of the Blinebry and Drinkard zones under NMOCC Order No. R-5064.

Bottom hole pressures have not been run on the Blinebry and Drinkard Pools in Eubanks No. 3 because of the down-hole leakage evidence. The most recent reliable pressure data on the two zones would be reflected in the packer leakage test conducted April 16 to 20, 1974. During that test 72-hour surface shut-in pressures of 395 and 285 psig were recorded on the Blinebry and Drinkard zones, respectively.

We would expect negligible impact on oil revenues to result from the requested commingling, as both the Blinebry and Drinkard oil gravities from Well No. 3 consistently have ranged from 38° to 38.5° API.

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Page 3: J. R. Cone down-hole and surface commingling application, Eubanks Well No. 3:

The Eubanks lease production facilities provide 500-barrel storage tanks for Blinebry oil storage whereas all liquids produced by the other three wells on the lease are gathered in 210-barrel tanks. Diversion of all Eubanks No. 3 liquid production in the 210-barrel tanks would reduce retention time between tank runs and thus should contribute to higher tank gravities from reduced retention time.

All offset operators to the Eubanks lease have been furnished a copy of this application together with attachments. Rather than requesting waivers, we propose to abide by the prescribed waiting period.

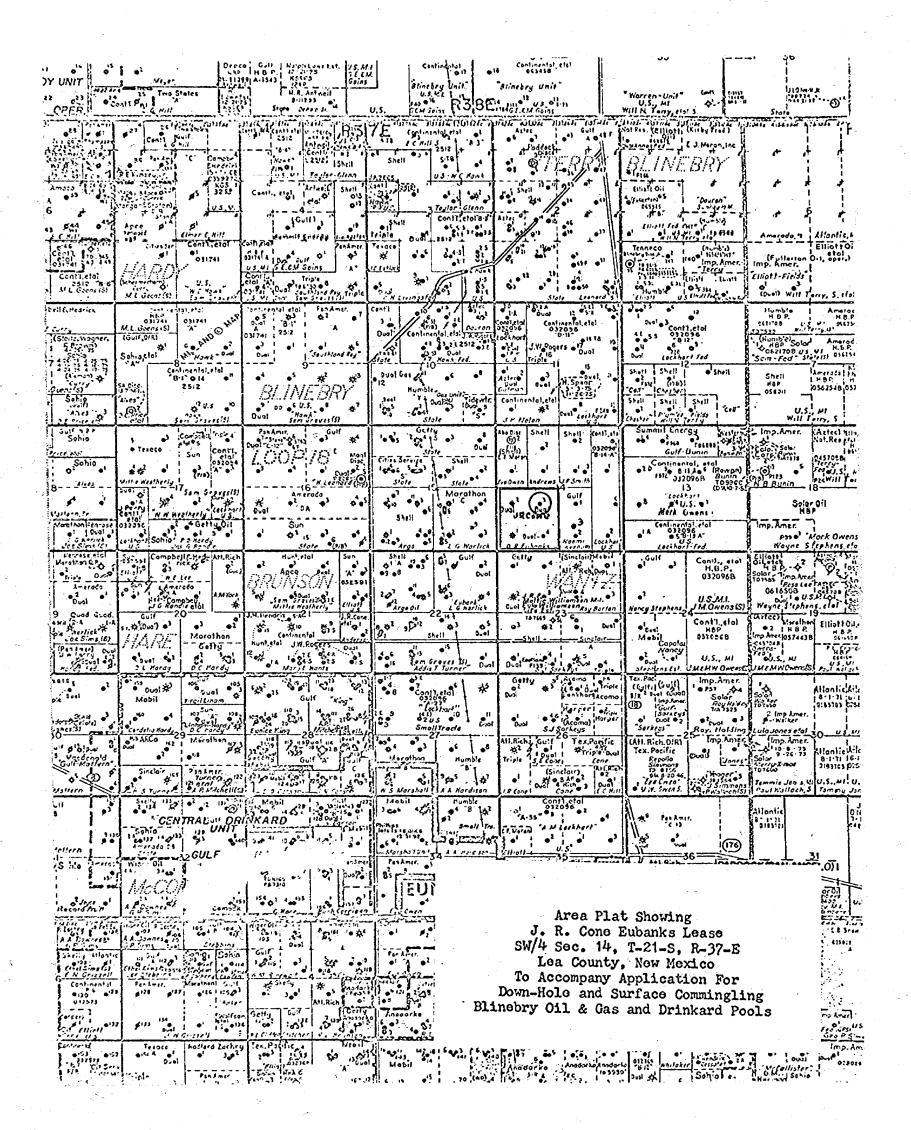
We shall appreciate your favorable consideration of this application. Please advise if additional information is required.

Respectfully submitted,

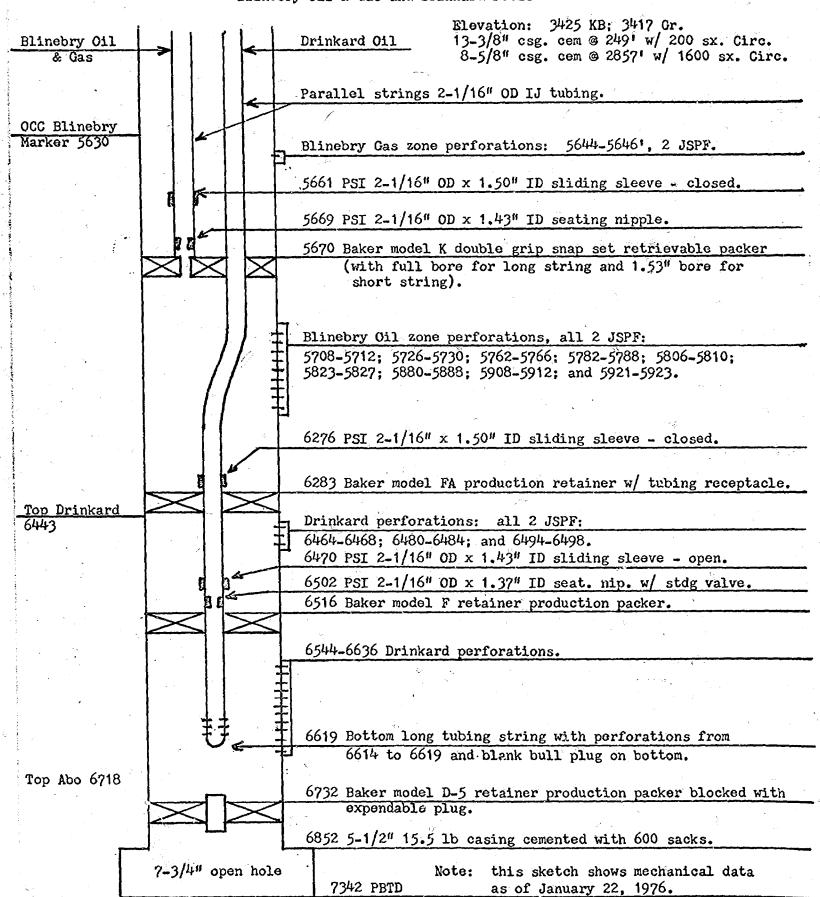
J. R. CONE

By \_ L. O. Storm

Attachments (5)



J. R. Cone Eubanks No. 3 NE SW Sec. 14, T-21-S, R-37-E, Lea County, New Mexico Diagrammatic Sketch of Down-hole Mechanical Arrangement Blinebry Oil & Gas and Drinkard Pools



#### NEW MEXICO OIL CONSERVATION COMMISSION GAS-OIL RATIO TESTS

C-116 Revised 1-1-65

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J. R. CONE	÷ .		Poo		ry Oil	. & Gas and	l D	rinkar	l Pool		inty!		Loa			
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No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15,025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

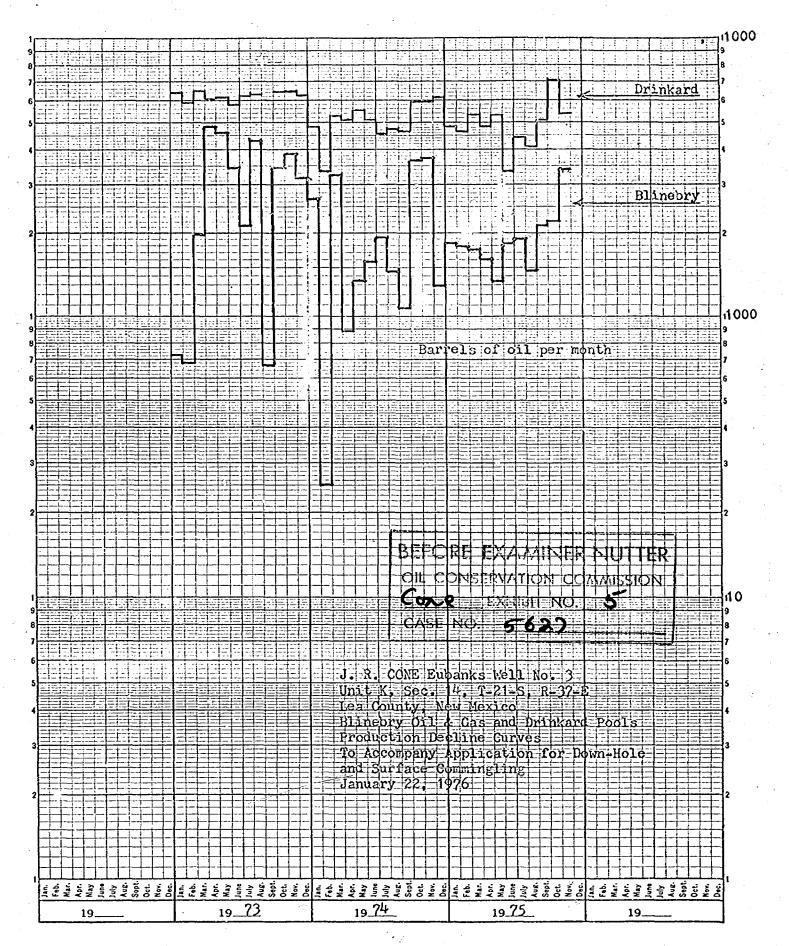
Report cooling pressure in lieu of tubing pressure for any well producing through casing.

Mall original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules,

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

- L. O. Storm (Signature) Engineer (Tide) January 22, 1976

(Date)



## List of Attachments

- 1. Area plat showing lease and well in question.
- 2. Mechanical schematic sketch showing present down-hole arrangement of well in question.
- 3. NMOCC Form C-116 presenting latest well tests.
- 4. Production decline curves of Blinebry Oil and Drinkard zones.

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Moranco (1)
P. O. Box 1919
Hobbs, New Mexico 88240

Shell Oil Company (1) P. O. Box 1509 Midland, Texas 79701 dry

# 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
Order No. R- 5/69
APPLICATION OF J. R. CONE
FOR DOWNHOLE COMMINGLING, LEA
COUNTY, NEW MEXICO.
ORDER OF THE COMMISSION
BY THE COMMISSION:
This cause came on for hearing at 9 a.m. on February 18
19 76, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter
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, J. R. Cone , is the
owner and operator of the Eubanks Well No. 3 , located
in Unit K of Section 14 , Township 21 South , Range
37 East , NMPM, Lea County, New Mexico.
(3) That the applicant seeks authority to commingle
Blinebry and Drinkard oil and gas production
within the wellbore of the above-described well.
(4) That from the Blinebry zone, the
subject well is capable of Low marginal production only.
(5) That from the Drinkard zone, the
subject well is capable of low marginal production only,
(6) That the proposed commingling may result in the recovery
of additional hydrocarbons from each of the subject pools, thereby
preventing waste, and will not violate correlative rights.
$\Gamma$

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Case No.	1
Order No. R	- }
(7) That the reservoir characteristics of each of the	
subject zones are such that underground waste would not be cause	d
by the proposed commingling provided that the well is not shut-i	n
for an extended period.	
(8) That to afford the Commission the opportunity to asses	s
the potential for waste and to expeditiously order appropriate	
remedial action, the operator should notify the Hobbs distri	ct
office of the Commission any time the subject well is shut-in fo	r
7 consecutive days.	4
(9) That in order to allocate the commingled production	
to each of the commingled zones in the subject well, 25	
percent of the commingled of production should be alloca	
to the Blinebry zone, and 75 percent of	the
commingled oil and 19 sercent of the commingled gas production to the Drinkard	_
zone.	
IT IS THEREFORE ORDERED:	}
(1) That the applicant, J. R. Cone , is	
hereby authorized to commingle Blinebry and	
Drinkard production within the wellbore	
of the Eubanks Well No. 3 , located in Unit K	
of Section 14, Township 21 South, Range 37	
East , NMPM, Lea County, New Mexico.	
(2) That 25 percent of the commingled oil and 81 secent of the commingled gas production	į
production shall be allocated to the Blinebry	
· · · · · · · · · · · · · · · · · · ·	
zone and 75 percent of the commingled and 19 percent of the commingled quiproduction	
oil production shall be allocated to the Drinkard	.
zone.	.
(3) That the operator of the subject well shall immediatel	v
notify the Commission's Hobbs district office any time the w	
has been shut-in for 7 consecutive days and shall concurrently	
present, to the Commission, a plan for remedial action.	•
(4) That jurisdiction of this cause is retained for the en of such further orders as the Commission may deem necessary.	try

1423 NORTH AVENUE P Date 2/6/76

Case 5697

P. O. BOX 871 LUBBOCK, TEXAS 79408 Jas WELLONSON COMM.

Pluce Deepno se Comm.

Pet for he caring January 22, 1976

Oil Conservation Commission P. O. Box 2088 Santa Fe. New Mexico 87501

Attention: Mr. Joe D. Ramey, Secretary-Director

Re: Application for Administrative Approval, Down-Hole and Surface Commingling, J. R. Cone Eubanks No. 3, Blinebry Oil & Gas and Drinkard Pools, Unit K, Section 14, T-21-S, R-37-E, Lea Co., NM.

Dear Mr. Ramey:

J. R. Cone herewith makes application for administrative approval of down-hole and surface commingling of the Blinebry Oil & Gas and Drinkard Pools in his Eubanks Well No. 3. The said well is located 1980 feet from The South line and 1830 feet from the West line, Unit K, Section 14, T-21-S, 37-E, NMPM, Lea County, New Mexico.

In support of this application the following attachments are appended hereto:

1. Area plat showing location of the subject well and lease;

- 2. Diagrammatic sketch showing the present down-hole mechanical arrangement in Eubanks No. 3;
- 3. NMOCC Form C-116 which presents the most recent well test data of the Blinebry Oil & Gas and the Drinkard zones;
  - 4. Production decline curves of the two producing zones; and,
- 5. A list of all offset operators to the Eubanks lease each of whom has been furnished a copy of this application.

Ownership is common as to all hydrocarbons underlying the Eubanks lease.

Originally Eubanks No. 3 was completed in December 1952 in the Wantz Abo Pool from the open-hole interval 6852 to 7342 feet. In December 1953 the well was recompleted in the Drinkard Pool via casing perforations 6544 to 6636 feet.

Next, Eubanks No. 3 was recompleted in March 1963 as a Blinebry oil over Drinkard oil dual utilizing two strings of 2-1/16-inch tubing under NMOCC Order No. R-2451. This recompletion was unique in that the upper Drinkard, the Blinebry Gas, and the Blinebry Oil zones all were opened then separated by packers and sliding sleeve valves to permit controlled entry of gas from

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Page 2: J. R. Cone down-hole and surface commingling application, Eubanks Well No. 3:

the Blinebry gas section within the limitations of the Blinebry Oil Pool legal gas limit. The sliding sleeve valve in the stub Blinebry Oil tubing string opposite the Blinebry gas section has been closed since November 1963 in compliance with the COR stipulations of Order No. R-2451.

Effective January 1, 1972 the Blinebry side of Eubanks No. 3 was reclassified by the NMOCC as a gas well because of excessive gas-oil ratio. Although marginal in both oil and gas capacity the well has been produced since then in compliance with the reclassification.

In August 1969 repair operations were conducted to correct down-hole communication via a hole in the Drinkard (long) tubing string at a depth of 5757 feet between the Baker model K retrievable packer which serves to isolate the Blinebry Gas zone and the FA production retainer which separates the Blinebry Oil and Drinkard zones. Surface pressure and production tests indicate that a similar down-hole failure now exists in the well.

The attached NMOCC Form C-116 presents the last well tests prior to observance of probable down-hole communication. Should this application be approved, it is suggested that the commingled oil and gas production be allocated to the respective zones on the basis of those tests as follows:

Blinebry: Oil 25 percent; gas 81 percent. Drinkard: Oil 75 percent; gas 19 percent.

No incompatibility problems are expected from the proposed down-hole commingling. The southwest offsetting J. R. Cone Eubanks No. 1 has been produced since August 1972 under NMOCC Order No. DHC-117 with down-hole commingling of the Blinebry and Drinkard zones with no evident negative consequences. In addition, the south offsetting J. R. Cone Eubanks No. 4 has been recompleted recently for down-hole commingling of the Blinebry and Drinkard zones under NMOCC Order No. R-5064.

Bottom hole pressures have not been run on the Blinebry and Drinkard Pools in Eubanks No. 3 because of the down-hole leakage evidence. The most recent reliable pressure data on the two zones would be reflected in the packer leakage test conducted April 16 to 20, 1974. During that test 72-hour surface shut-in pressures of 395 and 285 psig were recorded on the Blinebry and Drinkard zones, respectively.

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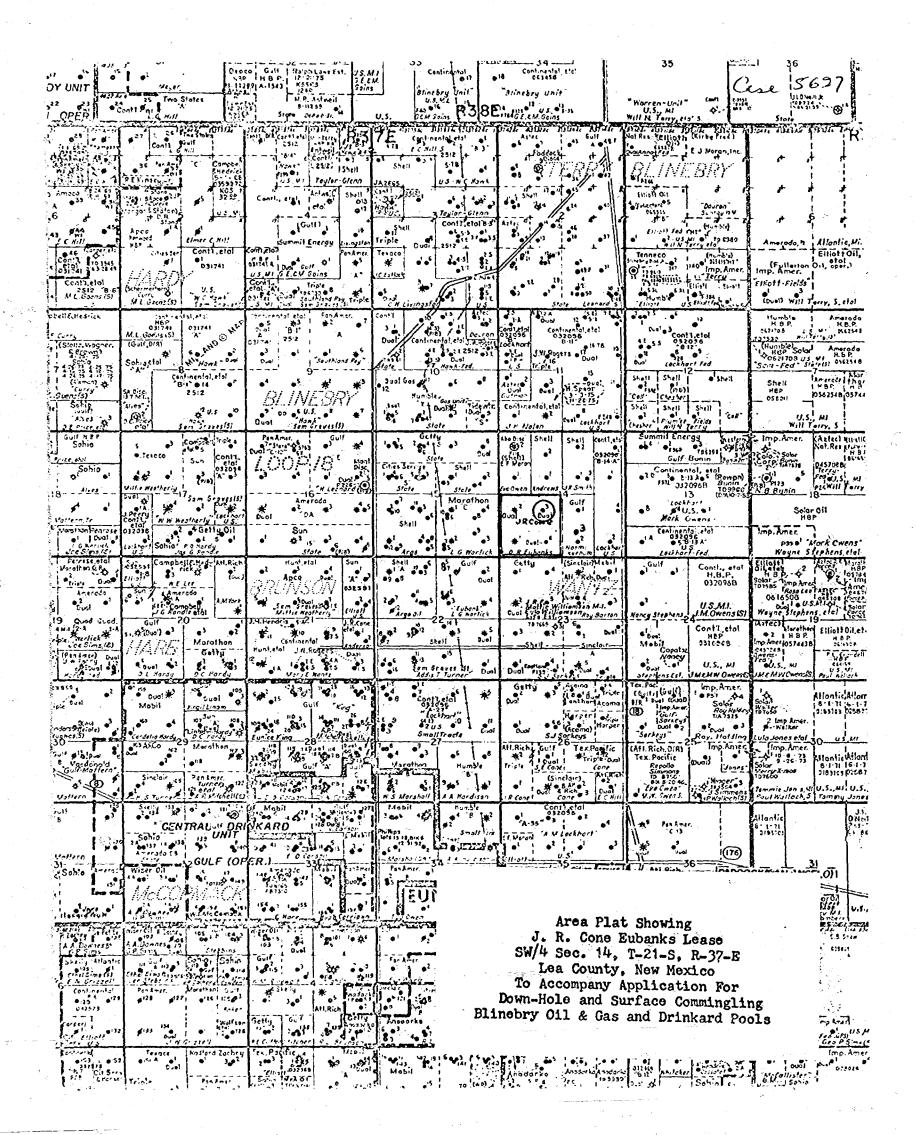
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Respectfully submitted,

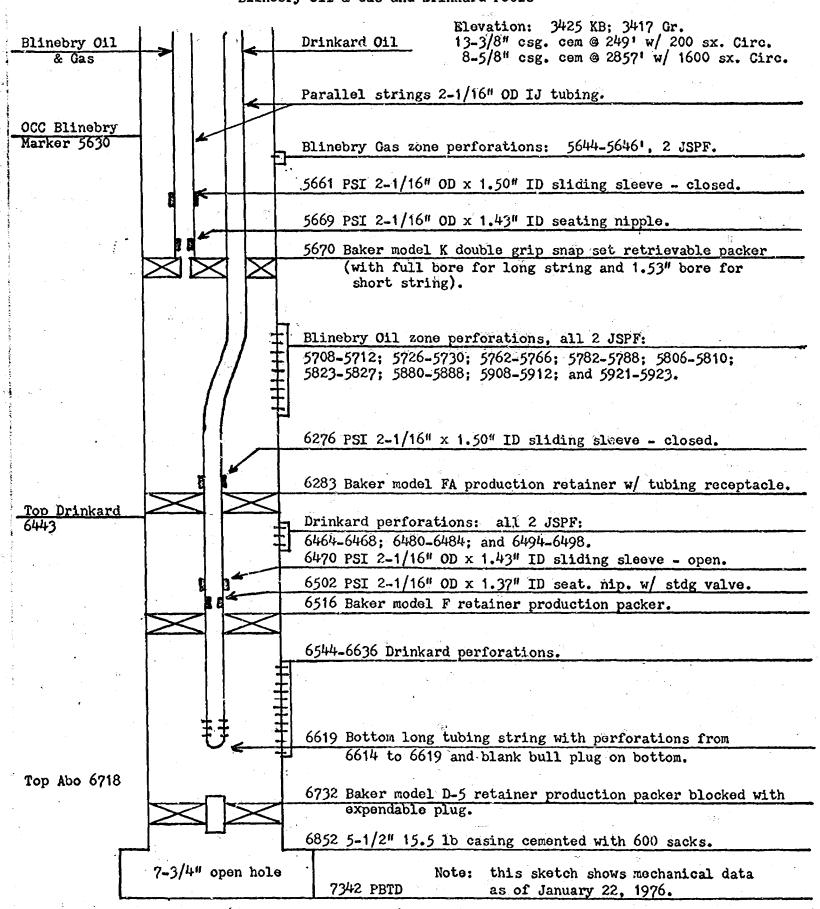
J. R. CONE

L. O. Storm

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## NEW MEXICO OIL CONSERVATION COMMISSION GAS-OIL RATIO TESTS

C-116 Revised 1-1-65

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Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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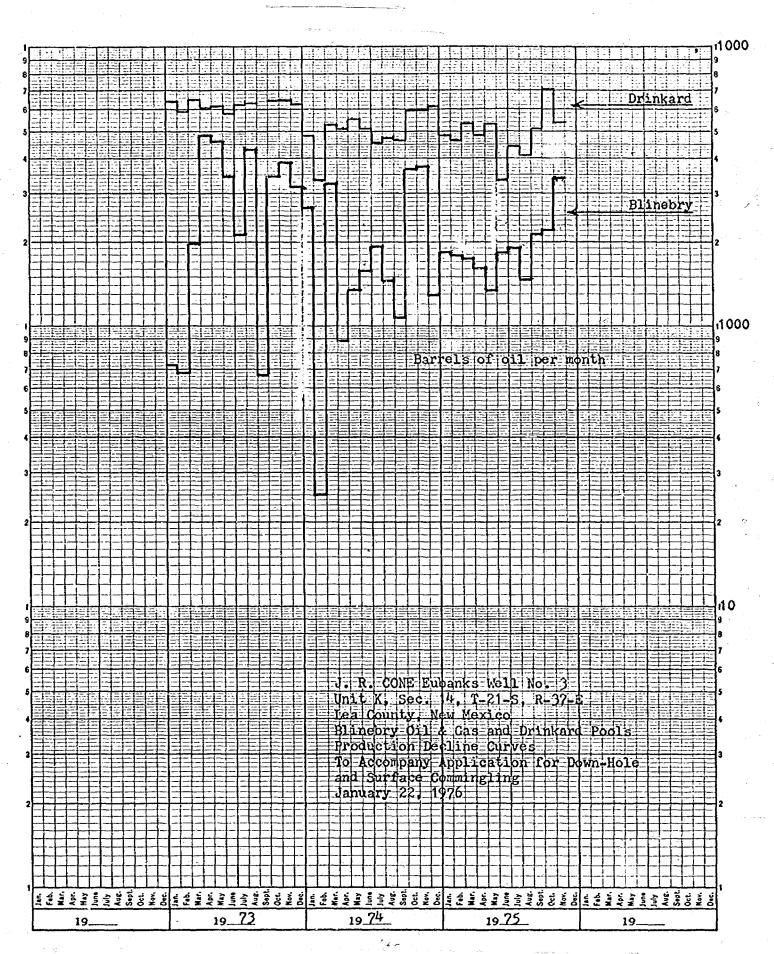
Lo Storm - L. O. Storm

(Signature)
Engineer

(Title)

January 22, 1976

(Date)



KOE X S LOG CYCLES MAKIN U.B.A. .
KEUPFEL & ESSER CO.

### List of Attachments

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sid morrish reporting service

General Court Reporting Service
825 Calle Mejia, No. 122, Sarta Fe. Now Mexico 87501

Phone (505) 982-9212

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MR. NUTTER: We will call Case Number 5627.

MR. CARR: Case 5627, application of J. R. Cone for downhole commingling, Lea County, New Mexico.

MR. KELLAHIN: Tom Kellahin of Kellahin and Fox,
Santa Fe, appearing on behalf of the Applicant and I have one
witness to be sworn.

(THEREUPON, the witness was duly sworn.)

### L. O. STORM

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

#### DIRECT EXAMINATION

#### BY MR. KELLAHIN:

- Q. Please state your name and occupation?
- A. L. O. Storm, Engineer for J. R. Cone, Independent Oil Producer, Lubbock, Texas.
- Mr. Storm, have you previously testified before this Commission and had your qualifications as an expert witness accepted and made a matter of record?
  - A. I have.
- And are you familiar with the facts surrounding this particular application by J. R. Cone?
  - A Yes, sir.

MR. KELLAHIN: If the Examiner please, are the

refer to what has been marked as Applicant Exhibit Number One and state briefly what the Applicant is seeking in this case? The Applicant is seeking approval for downhole commingling the Blinebry pools and the Drinkard pools in his

MR. NUTTER: Yes, they are.

witness' qualifications acceptable?

21 South, Range 37 East, Lea County. Would you refer to Exhibit Two and identify the subject well?

Eubanks Well No. 3, located in Unit K of Section 14, Township

(Mr. Kellahin continuing.) Mr. Storm, would you

Exhibit Two is a plat of the area. The Eubanks lease constitutes the southwest quarter of the said Section 14 that I referred to earlier. Well No. 3 is located in the northeast forty acres of the lease.

Is the ownership common in all of the horizons underlying the Eubanks lease?

- Ownership of oil and gas under the lease is common.
- Please refer to what has been marked as Exhibit Number Three and identify it?

Exhibit referred to by counsel is a schematic sketch of the downhole mechanical arrangement in the well. It is a little bit unique in that it involves three production retainers and a retrievable packer.

Where have you experienced the downhole leakage?

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The best I can tell from surface pressure and production measurements, it is in the long or Drinkard tubing

string between the top two packers. We have had a similar failure some years back in the same section of pipe. It was repaired.

- Will this completion be changed in any manner in order to produce it under an order approving downhole commingling?
- Only to the extent that I would propose opening of the sleeve, or the sliding sleeve valve, if you wish.
  - Where is that located?
- In the long tubing string located at an approximate depth of sixty-two, seventy-six feet.
  - Please refer to Exhibit Number Four and identify it? Q.
- That is a C-116, Conservation Commission form, that presents the last reliable production tests of the Blinebry oil and gas in the Drinkard pools in the subject well prior to the indication of a downhole failure.
  - And Exhibit Number Five?
  - Exhibit Number Five is a production decline curve plotted from oil production data filed with the Commission on Form C-115's from the Drinkard and the Blinebry pools in said well, Number 3.
    - How would you propose to allocate the production between the Blinebry and the Drinkard?

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A.	On the basis of th	e tests i	ndicat	ed on th	e C-11	6
that woul	d allocate twenty-f	ive perce	nt of	the oil	to the	
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- In your opinion, Mr. Storm, will the approval of this application result in the recovery of additional hydrocarbons from each of the commingled zones that otherwise would not be recovered?
- A. This I can't guarantee but I think it is entirely possible. I think conservation would be realized in the expenditure that the operator would not have to make to kill the well and repair it at this time.
- Q Do you anticipate any negative effects from either of the producing formations from the proposed commingling?
- A. No, and I take this from what we have observed in the operations of the Eubanks Well No. 1 which had a similar downhole failure. It has been produced with downhole commingling under Conservation Commission Order DHC-117 and the well has been so produced since August of 1972.
  - 0 Would you locate that Eubanks No. 1 Well, please?
- A It is located in the southwest forty acres of the lease, it is a southwest direct offset to the Eubanks No. 3, now in question.
  - And it is currently a downhole commingling of the

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identify what pool each of those four wells on the lease is completed in, please?

- At this point in time?
- Yes.
- Starting with Well No. 1, it's a dual completion in the Blinebry, what the Commission used to call Blinebry oil and the Drinkard pool. It has a downhole failure, it is produced as a downhole commingled Blinebry and Drinkard well.
- Is that well classified as an oil well or a gas well as far as the Blinebry is concerned?
  - An oil well.

Well No. 2 is a dual completion or was affected as a dual completion in the Blinebry and the Tubb gas pools. The Blinebry oil gas ratio became in excess of thirty-two thousand to one under the old R-1670 order. Effective January 1, 1972 the Blinebry zone was shut in in the well and has remained shut in. It is produced as a single Tubb well. It is equipped with parallel strings of tubing.

Well No. 3 is equipped with parallel tubing strings to produce from the Drinkard and the Blinebry oil zones.

Well No. 4 was drilled as a dual, completed as a dual in the Drinkard and Blinebry oil pools and under Commission Order No. R-5064, dated last summer, I think it was in July, we entered the well to dually complete it from the Abo through one tubing string with downhole commingling of the sid morrish reporting service
General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

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Blinebry and Drinkard pools through the second tubing string. This was authorized under that order. We failed in that effort and the Abo is now cemented off in the well and it is equipped with a single tubing string to produce the Blinebry and the Drinkard through one tubing string.

- Q So, with the four wells on the lease, you have two wells that are commingled in the Blinebry and the Drinkard?
- A. That are authorized under existing Commission orders too, two wells now so completed and we are requesting a third one be granted.
- Q I see. Now, Wells No. 1 and 4 are classified as oil wells in the Blinebry, what is Well No. 3 classified as?
  - A. By the Commission as a gas well.
  - Q It has been reclassified as a gas well?
  - A. Yes.
- Q Okay, now, I notice here on Form C-116 that the well on test made five hundred and twenty-six MCF in a twenty-four hour period, is that well classified as a marginal or non-marginal well in the Blinebry?
- A. It will not make the assigned Blinebry gas allowable if this is the intent of your question.
  - Q. I see.
  - A. It is marginal both as a liquid and as a gas well.
  - 0 I see
    - A. I would point out to the Commission that upon this

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Phone (\$05) 987-9212

reclassifiction, effective January 1, 1972, both of the Eubanks Wells 2 and 3, in the north half of the lease, the ratios got out of hand and they were reclassified as gas wells. The No. 2 well was shut in and subsequently we applied to the Commission and obtained approval of an eighty acre nonstandard gas unit to be assigned in the Blinebry pool to Well No. 3, but the well will not make the current allowables assigned to Blinebry gas wells.

- Q So since the Blinebry is shut in in that well, its acreage is dedicated to the well that is the subject of this hearing?
- A. Correct, but that's incidental, the well doesn't have the capacity to produce it.
- Now, on your schematic you show another set of perforations up here at fifty-six forty-four to forty-six, are those perforations still open?
- they are above a retrievable packer and isolated by that packer in a closed sleeve in the stub string. There is no means of entry in the long string, except by some kind of failure. But pressure performance of the well is identifiable only through the -- well, it suggests that a tubing failure in the long string between the Model K retrievable packer at fifty-six, seventy and above the FA production retainer at sixty-two, eighty-three.

- Q So how do those upper perforations produce, up through the annulus?
  - A. They are not produced, sir.
- Q They would have to produce through the annulus with that setup?

A tone time when we first -- we got the permission in 1963 to dually complete -- we proposed to the Commission and subsequently the Commission approved that we open the Blinebry gas section and be permitted to produce it through a sliding sleeve valve into the Blinebry string up to a maximum gas-oil ratio of six thousand to one. A similar completion was authorized for Well No. 1. Both mechanical arrangements were unique at that point in time. It was our wish to obtain maximum legal gas from the Blinebry section because the oil zone was producing at the ratio of, say, a thousand to fifteen hundred to one. As soon as that ratio in that well passed six thousand, we closed that sleeve and those four perforations at fifty-six, forty-four to forty-six have been isolated since that time.

- Q And not produced at all?
- A. Not to my knowledge.

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

(THEREUPON, the witness was excused.)

MR. NUTTER: Do you have anything further,

	1.0	
Page	12	

Mr. Kellahin?

MR. KELLAHIN: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Case 5627? We will take the case under advisement.

sid morrish reporting service General Court Reporting Service 825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501 Phone (505) 982-9212

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Page	3	13_	
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## 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

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3627, heard by me on 2/18, 1976.

New Mexico Oil Conservation Commission

sid morrish reporting service

General Court Reporting Service

General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

100 ASS



DIRECTOR

JOE D. RAMEY

### OIL CONSERVATION COMMISSION

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

LAND COMMISSIONER PHIL R. LUCERO



STATE GEOLOGIST
EMERY C. ARNOLD

Mr. Tom Kellahin	Re:	CASE NO. ORDER NO.	562 R-516	7 9	
Kellahin & Fox	,	<u> </u>			
Attorneys at Law Post Office Box 1769 Santa Fe, New Mexico		Applicant	•		-
		J. 1	R. Cone		
Dear Sir:					
Enclosed herewith are tw Commission order recently	o co y en	pies of th tered in t	e above he subj	-referer	ced
Yours very truly,		4 ·	•4		
SAME X VIA ALLO V			•		
DOE D. RAMEY	•				
DITECTOR					
Director					
Director  JDR/fd					
JDR/fd Copy of order also sent	to:				
Director  JDR/fd	to:				

Docket No. 6-76

Dockets Nos. 8-76 and 9-76 are tentatively set for hearing on March 3 and March 17, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

#### DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 18, 1976

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,

STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO
The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas for March, 1976, from seventeen prorated pools in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.
  - Consideration of the allowable production of gas for March, 1976, from five prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.
  - Consideration of purchaser's nominations for the one-year period beginning April 1, 1976, for both of the above areas.
- CASE 5627:

Application of J. R. Cone for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval to commingle Blinebry and Drinkard oil and gas production in the wellbore of his Eubanks Well No. 3, located in Unit K of Section 14, Township 21 South, Range 37 East, Lea County, New Mexico.

- CASE 5628: Application of Texaco Inc. for downhole commingling, lea County, New Mexico. Applicant, in the above-styled cause, seeks approval to commingle Blinebry, Drinkard, and Brunson-Ellenburger production in the wellbore of its A. H. Blinebry Federal Well No. 3, located in Unit E of Section 31, Township 22 South, Range 38 East, Lea County, New Mexico.
- Application of Odessa Natural Corporation for pool creation, assignment of a discovery allowable and special pool rules, Rio Arriba and Sandoval Counties, New Mexico. Applicant, in the above-CASE 5629: styled cause, seeks the creation of a new pool for the production of oil from the Dakota formation in Township 23 North, Range 3 West, Rio Arriba and Sandoval Counties, New Mexico, and the promulgation of special pool rules for said pool, including a provision for 320-acre spacing. Applicant further seeks the assignment of an oil discovery allowable to the discovery well for the pool being the Dave W. Thomas Chacon Jicarilla Apache. "D" Well No. 1, located in Unit A of Section 23, Township 23 North, Range 3 West, Sandoval County, New Mexico.
- CASE 5098: (Reopened)

In the matter of Case 5098 being reopened pursuant to the provisions of Order No. R-4682, which order established special rules for the Red Tank-Morrow Gas Pool, Lea County, New Mexico, including a provision for 640-acre spacing. All interested parties may appear and show cause why said pool should not be developed on 320-acre spacing.

In the matter of the hearing called by the Oil Conservation Commission on its own motion to CASE 5630: consider the contraction of the Double L-Queen Associated Pool by the deletion of certain lands on the east side thereof and the concurrent extension of the Vest Ranch-Queen Pool to include said lands. Further, to consider the reclassification of said Vest Ranch-Queen Pool and the promulgation of special pool rules therefor similar to those rules previously adopted for the Double L-Queen Associated Pool. Also to consider redesignation of the Vest Ranch Queen Pool as the Vest Ranch Queen Associated Pool.

> The Double L-Oueen Associated Pool would be contracted by the deletion of the following-described lands:

TOWNSHIP 14 SOUTH, RANGE 30 EAST, NMPM

74 Section 32: All

Section 31: E/2 SE/4

Section 33: SW/4

TOWNSHIP 15 SOUTH, RANGE 30 EAST, NMPM

Section 4: W/2 Section 6: SE/4 Section 7: NE/4 Section 8: All Section 9: W/2 Section 16: NW/4 Section 17: N/2

The Vest Ranch Associated Queen Pool would be extended by the addition of the following-described lands:

TOWNSHIP 14 SOUTH, RANGE 30 EAST, RAPM Section 29: S

Section 28: SW/4

Section 32: E/2 Section 33: W/2 and SE/4

TOWNSHIP 15 SOUTH, RANGE 30 FAST, NMPM
Section 4: W/2 Section 8: N/2 and SE/4 Section 17: N/2

Section 5: All Section 16: NW/4 and NW/4 SW/4

Docket No. 7-76

Dockets Nos. 8-76 and 9-76 are tentatively set for hearing on March 3 and March 17, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - TUESDAY - FEBRUARY 24, 1976
OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 5571: (De Novo) (Continued from January 21, 1976 Commission Hearing)

Application of Robert G. Cox for amendment of Order No. R-4561, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks amendment of Order No. R-4561, which order permitted the directional drilling of applicant's Federal "EA" Well No. 1, located 330 feet from the North and West lines of Section 12, Township 18 South, Range 27 East, Empire-Abo Pool, Eddy County, New Mexico, in such a manner as to be bottomed within 100 feet of the surface location. Applicant seeks the amendment of said order to permit bottoming of the subject well approximately 58 feet from the North line and 8 feet from the West line of said Section 12 and to permit vertification of said downhole location by single-shot directional surveys made concurrently with the drilling of said well.

Upon application of Robert G. Cox, this case will be heard <u>De Novo</u> pursuant to the provisions of Rule 1220.

# OIL CONSERVATION COMMISSION Hobbs DISTRICT

		14 C	OLGERCATION FO	ON CO	UU ( Жил
OIL CONSERVATION COMMISSION	ī	DATE	Jan	uary	26, 1976
BOX 2088 SANTA FE, NEW MEXICO		RE:	Proposed Proposed	DHC NSL SWD WFX	X
Gentlemen:		**			
I have examined the ap	hrrcarron garea				
for the J. R. Cone Eu	bank #3-K		14-21-37		ств
for the J.R.Cone Eu Operator	bank #3-K Lease and Wel			nit,	S-T-R
for the J.R.Cone Eu Operator and my recommendations are	bank #3-K Lease and Wel			nit,	S-T-R
for the J.R.Cone Eu Operator and my recommendations are	bank #3-K Lease and Wel			nit,	S-T-R
for the J.R.Cone Eu Operator and my recommendations are	bank #3-K Lease and Wel			nit,	S-T-R
for the J. R. Cone Eu Operator and my recommendations are	bank #3-K Lease and Wel			nit,	S-T-R

Jerry Sexton

J. R. CONE

1423 NORTH AVENUE P
P. O. BOX 671

LUBBOCK, TEXAS 79408

January 22, 1976

Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey, Secretary-Director

Re: Application for Administrative Approval, Down-Hole and Surface Commingling, J. R. Cone Eubanks No. 3, Blinebry Oil & Gas and Drinkard Pools, Unit K, Section 14, T-21-S, R-37-E, Lea Co., NM.

Dear Mr. Ramey:

J. R. Cone herewith makes application for administrative approval of down-hole and surface commingling of the Blinebry Oil & Gas and Drinkard Pools in his Eubanks Well No. 3. The said well is located 1980 feet from the South line and 1830 feet from the West line, Unit K, Section 14, T-21-S, 37-E, NMPM, Lea County, New Mexico.

In support of this application the following attachments are appended hereto:

- 1. Area plat showing location of the subject well and lease;
- 2. Diagrammatic sketch showing the present down-hole mechanical arrangement in Eubanks No. 3;
- 3. NMOCC Form C-116 which presents the most recent well test data of the Blinebry Oil & Gas and the Drinkard zones;
  - 4. Production decline curves of the two producing zones; and,
- 5. A list of all offset operators to the Eubanks lease each of whom has been furnished a copy of this application.

Ownership is common as to all hydrocarbons underlying the Eubanks lease.

Originally Eubanks No. 3 was completed in December 1952 in the Wantz Abo Pool from the open-hole interval 6852 to 7342 feet. In December 1953 the well was recompleted in the Drinkard Pool via casing perforations 6544 to 6636 feet.

Next, Eubanks No. 3 was recompleted in March 1963 as a Blinebry oil over Drinkard oil dual utilizing two strings of 2-1/16-inch tubing under NMOCC Order No. R-2451. This recompletion was unique in that the upper Drinkard, the Blinebry Gas, and the Blinebry Oil zones all were opened then separated by packers and sliding sleeve valves to permit controlled entry of gas from

appl Ex 1
02 5627

Page 2: J. R. Cone down-hole and surface commingling application, Eubanks Well No. 3:

the Blinebry gas section within the limitations of the Blinebry Oil Pool legal gas limit. The sliding sleeve valve in the stub Blinebry Oil tubing string opposite the Blinebry gas section has been closed since November 1963 in compliance with the COR stipulations of Order No. R-2451.

Effective January 1, 1972 the Blinebry side of Eubanks No. 3 was reclassified by the NMOCC as a gas well because of excessive gas-oil ratio. Although marginal in both oil and gas capacity the well has been produced since then in compliance with the reclassification.

In August 1969 repair operationswere conducted to correct down-hole communication via a hole in the Drinkard (long) tubing string at a depth of 5757 feet between the Baker model K retrievable packer which serves to isolate the Blinebry Gas zone and the FA production retainer which separates the Blinebry Oil and Drinkard zones. Surface pressure and production tests indicate that a similar down-hole failure now exists in the well.

The attached NMOCC Form C-116 presents the last well tests prior to observance of probable down-hole communication. Should this application be approved, it is suggested that the commingled oil and gas production be allocated to the respective zones on the basis of those tests as follows:

Blinebry: Oil 25 percent; gas 81 percent. Drinkard: Oil 75 percent; gas 19 percent.

No incompatibility problems are expected from the proposed down-hole commingling. The southwest offsetting J. R. Cone Eubanks No. 1 has been produced since August 1972 under NMOCC Order No. DHC-117 with down-hole commingling of the Blinebry and Drinkard zones with no evident negative consequences. In addition, the south offsetting J. R. Cone Eubanks No. 4 has been recompleted recently for down-hole commingling of the Blinebry and Drinkard zones under NMOCC Order No. R-5064.

Bottom hole pressures have not been run on the Blinebry and Drinkard Pools in Eubanks No. 3 because of the down-hole leakage evidence. The most recent reliable pressure data on the two zones would be reflected in the packer leakage test conducted April 16 to 20, 1974. During that test 72-hour surface shut-in pressures of 395 and 285 psig were recorded on the Blinebry and Drinkard zones, respectively.

We would expect negligible impact on oil revenues to result from the requested commingling, as both the Blinebry and Drinkard oil gravities from Well No. 3 consistently have ranged from 38° to 38.5° API.

It is proposed that down-hole commingling in Well No. 3 would be supplemented by opening the sliding sleeve in the Drinkard tubing string immediately above the FA production retainer at 6276 feet. Because recent tests indicate the most efficient production of both oil and gas is obtained via the Blinebry tubing string, it is proposed to take all production from that tubing string.

Page 3: J. R. Cone down-hole and surface commingling application, Eubanks Well No. 3:

The Eubanks lease production facilities provide 500-barrel storage tanks for Blinebry oil storage whereas all liquids produced by the other three wells on the lease are gathered in 210-barrel tanks. Diversion of all Eubanks No. 3 liquid production in the 210-barrel tanks would reduce retention time between tank runs and thus should contribute to higher tank gravities from reduced retention time.

All offset operators to the Eubanks lease have been furnished a copy of this application together with attachments. Rather than requesting waivers, we propose to abide by the prescribed waiting period.

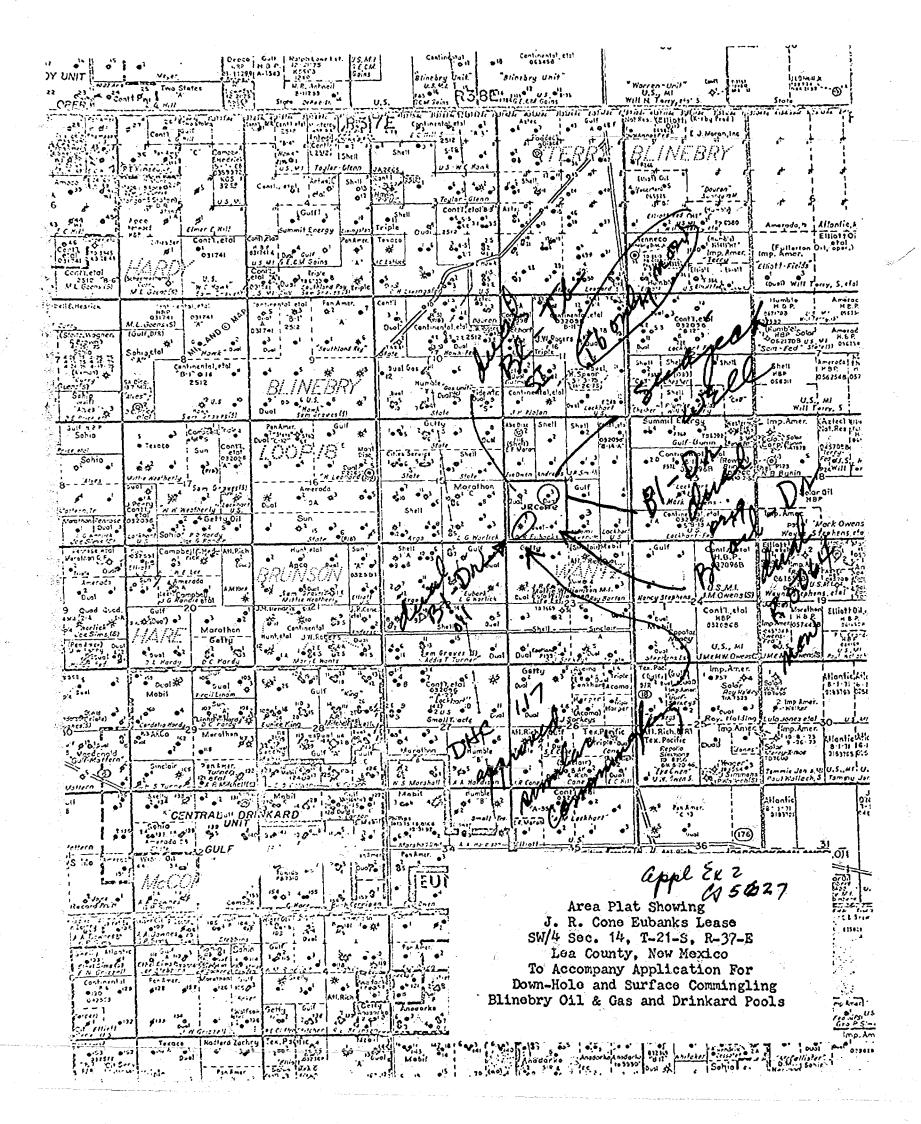
We shall appreciate your favorable consideration of this application. Please advise if additional information is required.

Respectfully submitted,

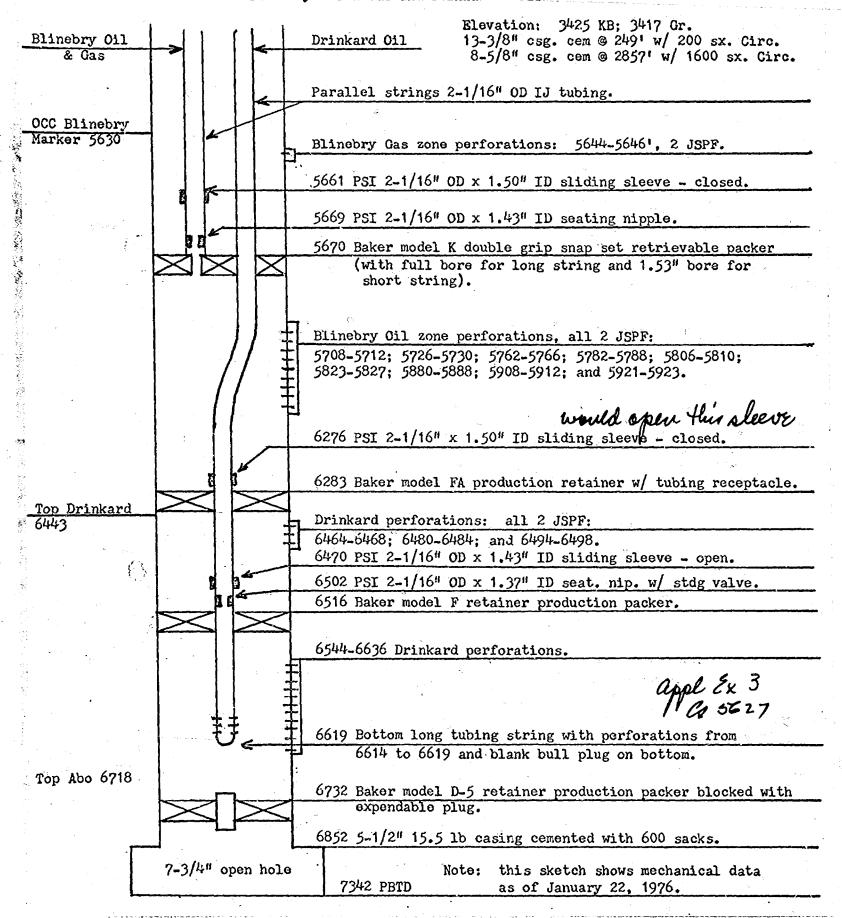
J. R. CONE

By L. O. Storm

Attachments (5)



J. R. Cone Eubanks No. 3
NE SW Sec. 14, T-21-S, R-37-E, Lea County, New Mexico
Diagrammatic Sketch of Down-hole Mechanical Arrangement
Blinebry Cil & Cas and Drinkard Pools



## NEW MEXICO OIL CONSERVATION COMMISSION GAS-OIL RATIO TESTS

C-116 Revised 1-1-65

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No well will be perferred on allowable greater than the amount of all gradued on the afficial last

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15,025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

Lo Storm - L. O. Storm

(Signature)

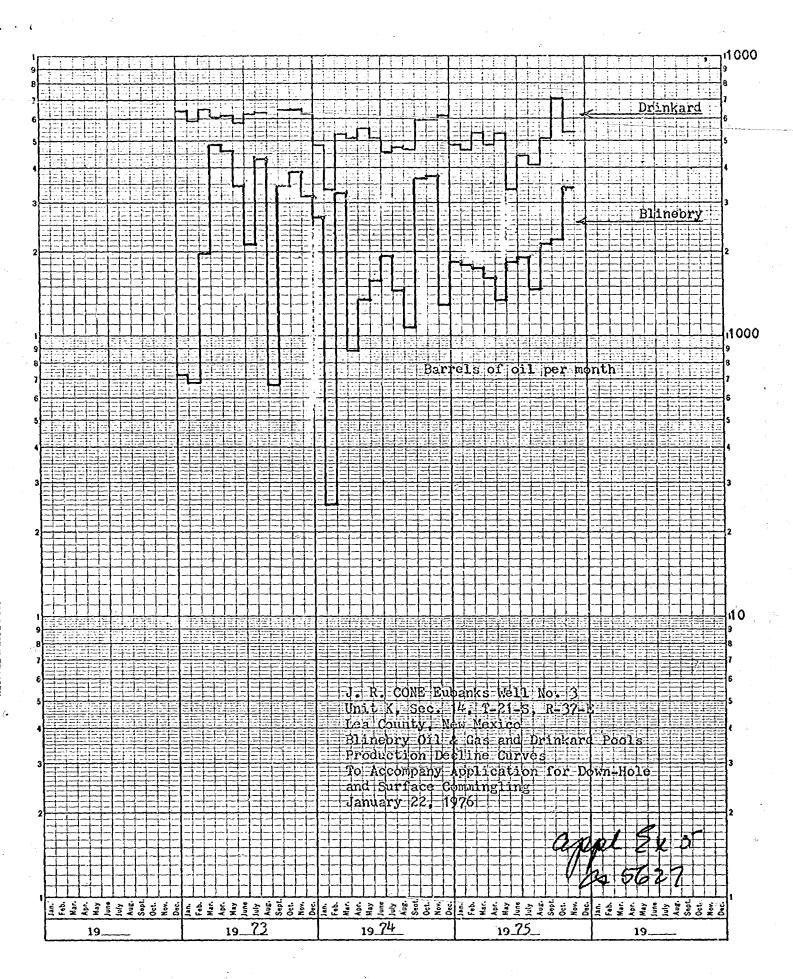
Engineer

(Title)

January 22, 1976

(Date)

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X 3 Log cycles Much 4.5.4.
KEUFFEL A ESSER CO.



### List of Attachments

- 1. Area plat showing lease and well in question.
- 2. Mechanical schematic sketch showing present down-hole arrangement of well in question.
- 3. NMOCC Form C-116 presenting latest well tests.
- 4. Production decline curves of Blinebry Oil and Drinkard zones.

### DISTRIBUTION LIST

Oil Conservation Commission (2)
P. O. Box 2088
Santa Fe, New Mexico 87501

Oil Conservation Commission (1) P. O. Box 1980 Hobbs, New Mexico 88240

Atlantic Richfield Company P. O. Box 1710 Hobbs, New Mexico 88240 (1)

Getty Oil Company (1) P. O. Box 249 Hobbs, New Mexico 88240

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Marathon Oil Company (1) P. O. Box 2409 Hobbs, Hew Mexico 88240

Moranco (1) P. O. Box 1919 Hobbs, New Mexico 88240

Shell Oil Company (1)
P. O. Box 1509
Midland, Texas 79701

#### J. R. CONE

Oil Conservation Commission P. O. Box 2088 Santa Fe. New Mexico 87501

Attention: Mr. Joe D. Ramey, Secretary-Director

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Page 2: J. R. Cone down-hole and surface commingling application, Eubanks Well No. 3:

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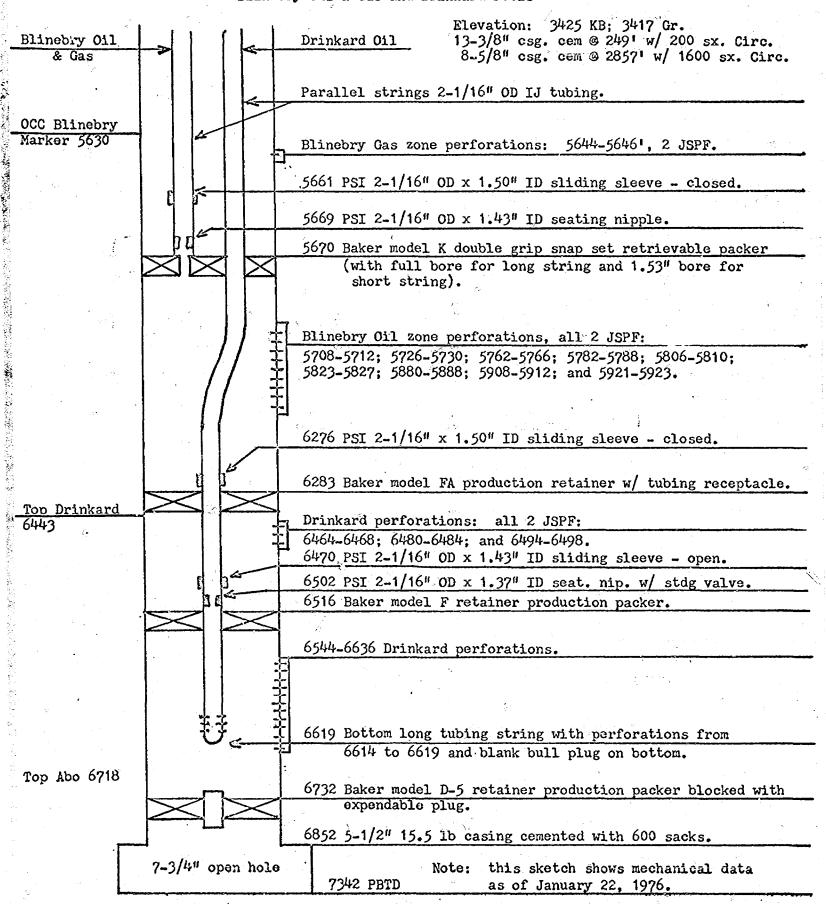
J. R. CONE

Attachments (5)

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J. R. Cone Bubanks No. 3 NE SW Sec. 14, T-21-S, R-37-E, Lea County, New Mexico Diagrammatic Sketch of Down-hole Mechanical Arrangement Blinebry Oil & Gas and Drinkard Pools



# NEW MEXICO OIL CONSERVATION COMMISSION GAS - OIL RATIO TESTS

C-116 Revised 1-1-65

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During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.00.

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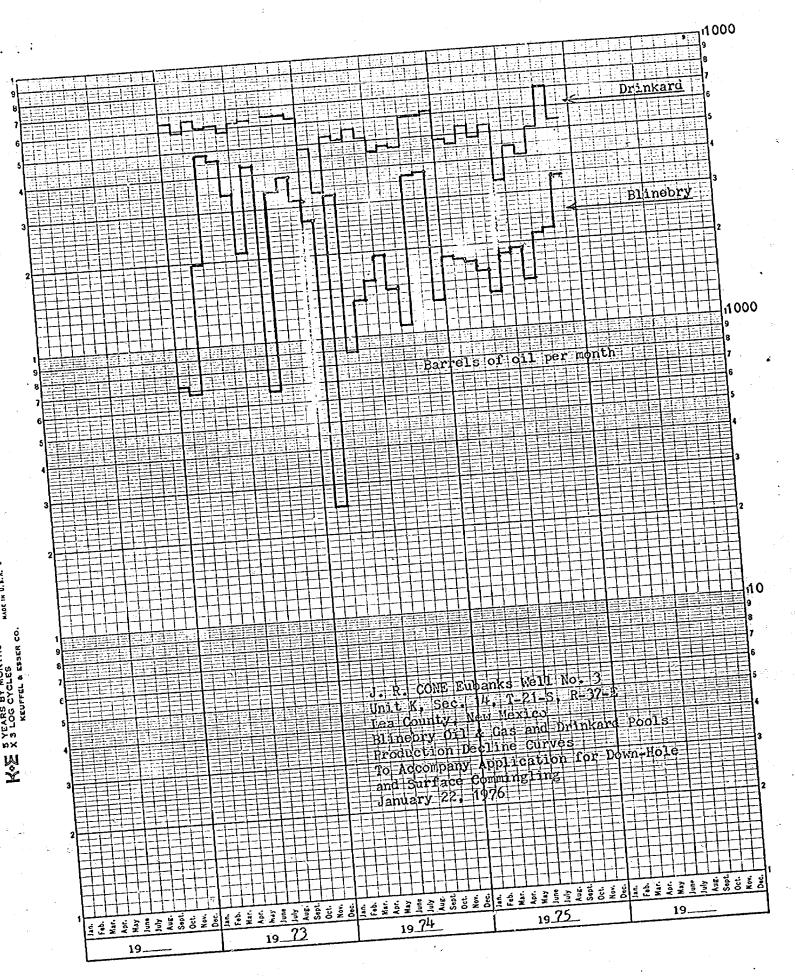
I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Ko Storm - L. O. Storm

(Signature)
Engineer

(Title)

January 22, 1976



46 6693 HADE IN U.S.A. T S YEARS BY MONTHS
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### List of Attachments

- 1. Area plat showing lease and well in question.
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- 3. NMOCC Form C-116 presenting latest well tests.
- 4. Production decline curves of Blinebry Oil and Drinkard zones.

### DISTRIBUTION LIST

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Shell Oil Company (1) P. O. Box 1509 Midland, Texas 79701 REBIDENCE PHONE BHERWOOD 4-8173 OFFICE PHONE PORTER 3-8211

J. R. CONE
1423 NORTH AVENUE P
P. D. BOX 871
LUBBOCK, TEXAS 79408
January 22, 1976

Cil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey, Secretary-Director

Re: Application for Administrative Approval, Down-Hole and Surface Commingling, J. R. Cone Eubanks No. 3, Blinebry Oil & Gas and Drinkard Pools, Unit K, Section 14, T-21-S, R-37-E, Lea Co., NM.

Dear Mr. Ramey:

J. R. Cone herewith makes application for administrative approval of down-hole and surface commingling of the Blinebry Oil & Gas and Drinkard Pools in his Eubanks Well No. 3. The said well is located 1980 feet from the South line and 1830 feet from the West line, Unit K, Section 14, T-21-S, 37-E, NMPM, Lea County, New Mexico.

In support of this application the following attachments are appended hereto:

- 1. Area plat showing location of the subject well and lease;
- 2. Diagrammatic sketch showing the present down-hole mechanical arrangement in Eubanks No. 3;
- 3. NMOCC Form C-116 which presents the most recent well test data of the Blinebry Oil & Gas and the Drinkard zones;
  - 4. Production decline curves of the two producing zones; and,
- 5. A list of all offset operators to the Eubanks lease each of whom has been furnished a copy of this application.

Ownership is common as to all hydrocarbons underlying the Eubanks lease.

Originally Eubanks No. 3 was completed in December 1952 in the Wantz Abo Pool from the open-hole interval 6852 to 7342 feet. In December 1953 the well was recompleted in the Drinkard Pool via casing perforations 6544 to 6636 feet.

Next, Eubanks No. 3 was recompleted in March 1963 as a Blinebry oil over Drinkard oil dual utilizing two strings of 2-1/16-inch tubing under NMOCC Order No. R-2451. This recompletion was unique in that the upper Drinkard, the Blinebry Gas, and the Blinebry Oil zones all were opened then separated by packers and sliding sleeve valves to permit controlled entry of gas from

Page 2: J. R. Cone down-hole and surface commingling application, Eubanks Well No. 3:

the Blinebry gas section within the limitations of the Blinebry Oil Pool legal gas limit. The sliding sleeve valve in the stub Blinebry Oil tubing string opposite the Blinebry gas section has been closed since November 1963 in compliance with the COR stipulations of Order No. R-2451.

Effective January 1, 1972 the Blinebry side of Eubanks No. 3 was reclassified by the NMOCC as a gas well because of excessive gas-oil ratio. Although marginal in both oil and gas capacity the well has been produced since then in compliance with the reclassification.

In August 1969 repair operationswere conducted to correct down-hole communication via a hole in the Drinkard (long) tubing string at a depth of 5757 feet between the Baker model K retrievable packer which serves to isolate the Blinebry Gas zone and the FA production retainer which separates the Blinebry Oil and Drinkard zones. Surface pressure and production tests indicate that a similar down-hole failure now exists in the well.

The attached NMOCC Form C-116 presents the last well tests prior to observance of probable down-hole communication. Should this application be approved, it is suggested that the commingled oil and gas production be allocated to the respective zones on the basis of those tests as follows:

Blinebry: Oil 25 percent; gas 81 percent. Drinkard: Oil 75 percent; gas 19 percent.

No incompatibility problems are expected from the proposed down-hole commingling. The southwest offsetting J. R. Cone Eubanks No. 1 has been produced since August 1972 under NMOCC Order No. DHC-117 with down-hole commingling of the Blinebry and Drinkard zones with no evident negative consequences. In addition, the south offsetting J. R. Cone Eubanks No. 4 has been recompleted recently for down-hole commingling of the Blinebry and Drinkard zones under NMOCC Order No. R-5064.

Bottom hole pressures have not been run on the Blinebry and Drinkard Pools in Eubanks No. 3 because of the down-hole leakage evidence. The most recent reliable pressure data on the two zones would be reflected in the packer leakage test conducted April 16 to 20, 1974. During that test 72-hour surface shut-in pressures of 395 and 285 psig were recorded on the Blinebry and Drinkard zones, respectively.

We would expect negligible impact on oil revenues to result from the requested commingling, as both the Blinebry and Drinkard oil gravities from Well No. 3 consistently have ranged from 38° to 38.5° API.

It is proposed that down-hole commingling in Well No. 3 would be supplemented by opening the sliding sleeve in the Drinkard tubing string immediately above the FA production retainer at 6276 feet. Because recent tests indicate the most efficient production of both oil and gas is obtained via the Blinebry tubing string, it is proposed to take all production from that tubing string.

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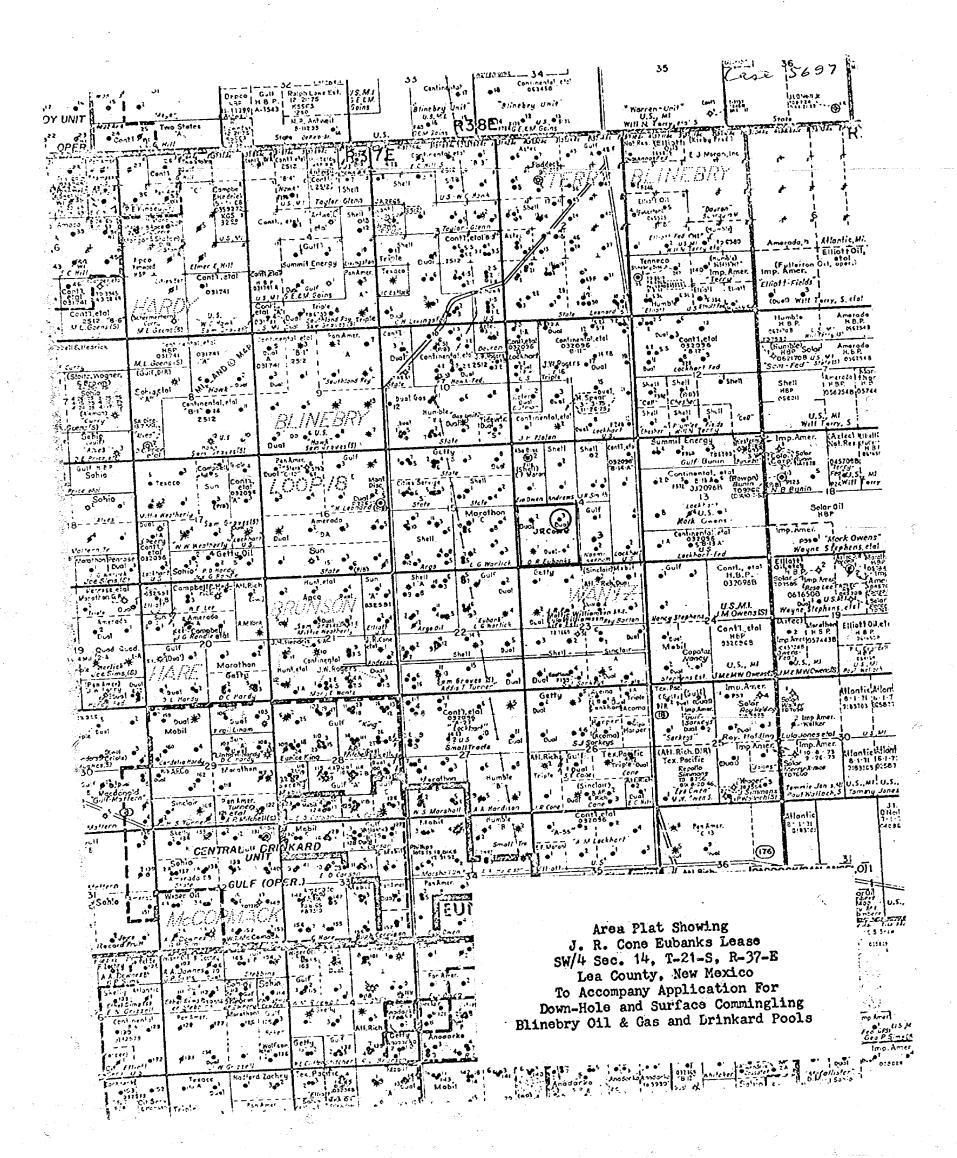
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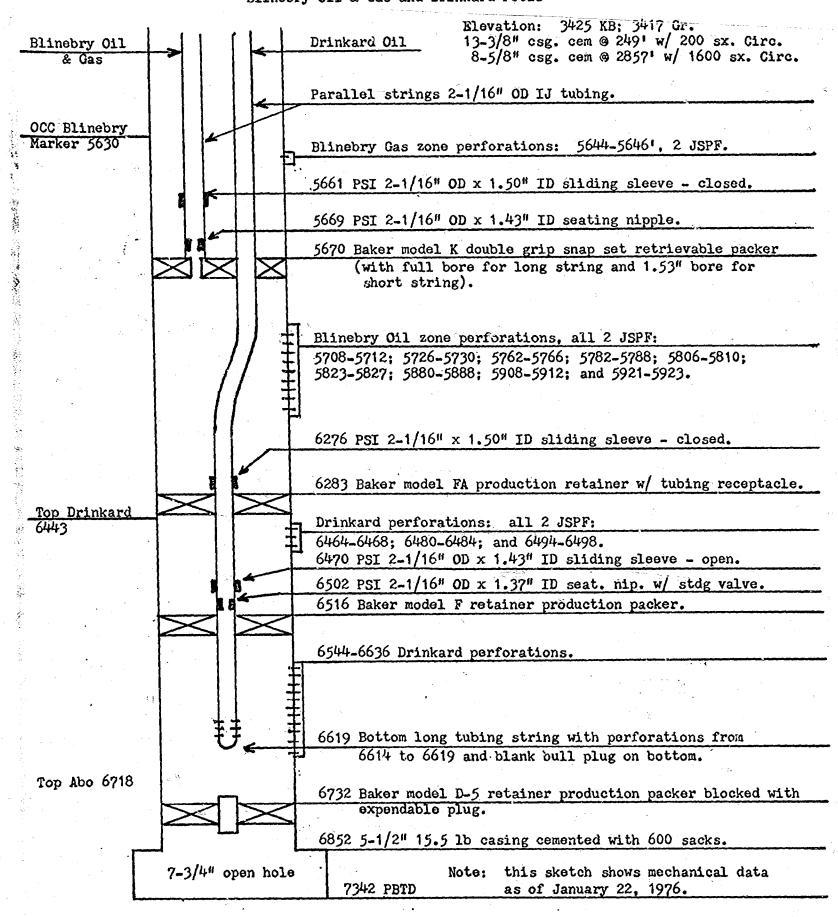
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C-116
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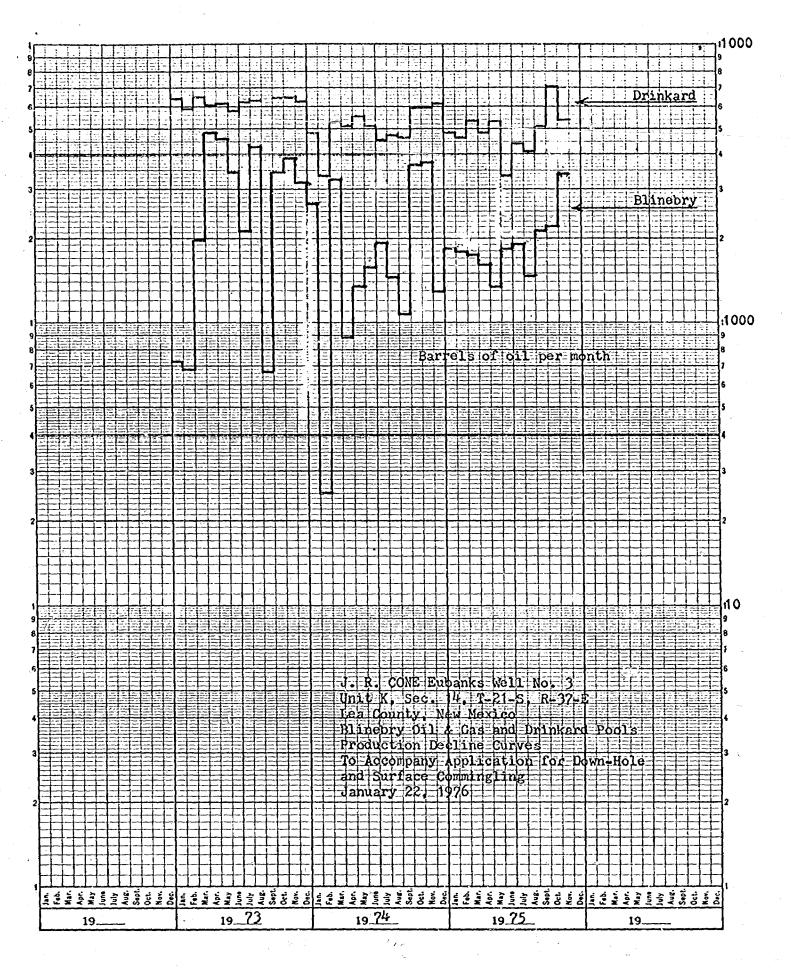
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