RESIDENCE PHONE
SHERWOOD 4-8173

OFFICE PHONE
PORTER 3-8211

J. R. CONE
1423 NORTH AVENUE P
P. O. BOX 871
LUBBOCK, TEXAS

DHC-117

June 22, 1972

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

Attention: Mr. A. L. Porter, Jr.,
Secretary-Director

Re: Application for Administrative Approval, Down-Hole Commingling,
J. R. Cone Eubanks No. 1, Blinebry Oil and Drinkard Pools,
Unit M, Section 14, T-21-S, R-37-E, Lea County, New Mexico

Dear Mr. Porter:

J. R. Cone herewith makes application for administrative approval of down-hole commingling of the Blinebry Oil and Drinkard pools in his Eubanks Well No. 1. The said well is located 660 feet from the South and West lines, Unit M, Section 14, T-21-S, R-37-E, NMPM, Lea County, New Mexico.

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

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

2. A diagrammatic sketch which shows the present down-hole mechanical arrangement in Eubanks No. 1;

3. NMOCC Form C-116 which presents the most recent well test data on both the Blinebry Oil and Drinkard zones; and,

4. Production decline curves of the two oil zones in question.

It should be noted also that ownership is common as to all hydrocarbon deposits underlying the J. R. Cone Eubanks lease.

Eubanks No. 1 first was completed as a single-zone Drinkard oil producer in April, 1949. In July, 1952 the well was recompleted as a Blinebry Gas over Drinkard oil dual producer under NMOCC Order No. R-137, to produce Blinebry gas from perforations 5510 to 5655 feet.

In August, 1963 the well was recompleted as a parallel tubing strings dual in the Blinebry Oil and Drinkard pools under NMOCC Order MC 1348. This completion was unique in that it provided for separation of the Blinebry Gas and Oil zones by a packer and permitted controlled down-hole production of the Blinebry Gas Pool via the Blinebry Oil zone tubing string until such time as the producing gas-oil ratio exceeded the 6,000:1 cubic feet per barrel limitation for the Blinebry Oil Pool.

The sleeve via which Blinebry Gas zone gas was admitted into the Blinebry Oil zone tubing string was closed November 2, 1964 in compliance with the aforementioned stipulation and has remained closed since that time. All packer leakage tests run since November, 1964 indicate positive separation of the Blinebry Oil and Gas zones, and that production of the Oil zone has no apparent influence on the overlying Gas section.

It will be noted from the attached Form C-116 that the Blinebry Oil and Drinkard zones currently flow a total 23 barrels of oil per day; that water production is negligible; and, the respective oil gravities are comparable. Thus we would anticipate no down-hole precipitate problems to result from down-hole commingling.

Relative production decline rates, the plot of Blinebry Oil zone tests is more realistic as to the actual capability of that zone than is the plot of monthly oil production which latter customarily reflects oil allocation to the well from total lease Blinebry oil production.

A bottom hole pressure of the two zones has not been run on the subject well because of recent evidence that communication is developing in the Drinkard (long) tubing string opposite the Blinebry Oil zone. This problem has been encountered and corrected twice before: in January, 1967, and again in May, 1969. External corrosion failure of the Drinkard tubing string was the cause of leakage in both cases (the first at a depth of 6069 feet; the second at 5946 feet). Periodic application of corrosion inhibitor in brine apparently has not provided the needed protection of the static area extending from the bottom Blinebry Oil zone casing perforations at 5946 feet to the top of the Baker FA retainer at 6315 feet (which packer is the primary separation tool between the Blinebry Oil and Drinkard Pools).

As definitive bottom hole pressures on Eubanks No. 1 probably could not be obtained under present well conditions, extrapolation can be made of May, 1972 72-hour shut in pressures and application of an assumed pressure gradient of 4.8 psig per 100 feet. Thus, the Blinebry Oil zone shut-in surface pressure of 745 psig would extrapolate to a BHP of 1024 psig at the datum of 2400 feet subsea. Similarly, the Drinkard surface SIP of 635 psig would indicate BHP's of 914 psig at 2400 feet subsea, and 945 psig at the Drinkard datum of 3050 feet subsea.

The value of the commingled oil would remain essentially unchanged on the basis of the latest well tests and current crude prices. Segregated, the Blinebry Oil and Drinkard crudes would realize a daily gross revenue of $ 79.90 based on respective daily oil rates of 21 and 2 barrels and prices of $ 3.46 and $ 3.52 per barrel. We compute that a commingled crude of approximately 36.0° API gravity would be developed which would command a price of $ 3.48 per barrel resulting in a gross daily revenue of $ 80.04 for 23 barrels of oil. We would expect casinghead gas production and revenue also to remain essentially unchanged.

It should be pointed out that the Eubanks lease production facilities provide 500-barrel storage tanks for the Blinebry Oil production and 210-barrel tanks for the Drinkard oil. Increased production rate into the Drinkard storage would reduce retention time between tank runs and thus should contribute to higher tank gravities from reduced weathering time.

We would mention that the last repair of Eubanks No. 1 cost in excess of $ 4,500, and anticipate repair now to maintain down-hole segregation would require an expenditure of $ 5,500 to $ 6,000. Authorized down-hole commingling would serve the aims of conservation by deferring or eliminating the requirement for such an expenditure.

The requested down-hole commingling would be accomplished by opening the sleeve in the Drinkard tubing string immediately above the Baker FA retainer at 6312 feet, and then taking oil production only via the Drinkard tubing string. This would eliminate the now-static annular area and permit inhibitor treatment of same by gravity application down the Blinebry Oil tubing string. Opening of the sleeve should have no negative impact on any future secondary recovery operations.

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

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

Respectfully submitted,

J. R. CONE

By L. O. Storm
L. O. Storm

Attachments (4)

List of Attachments

1. Area plat showing lease and well in question.

2. Diagrammatic sketch showing present down-hole mechanical arrangement of well in question.

3. NMOCC Form C-116 presenting latest well tests.

4. Production decline curves of Blinebry Oil & Drinkard zones.

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Production Department
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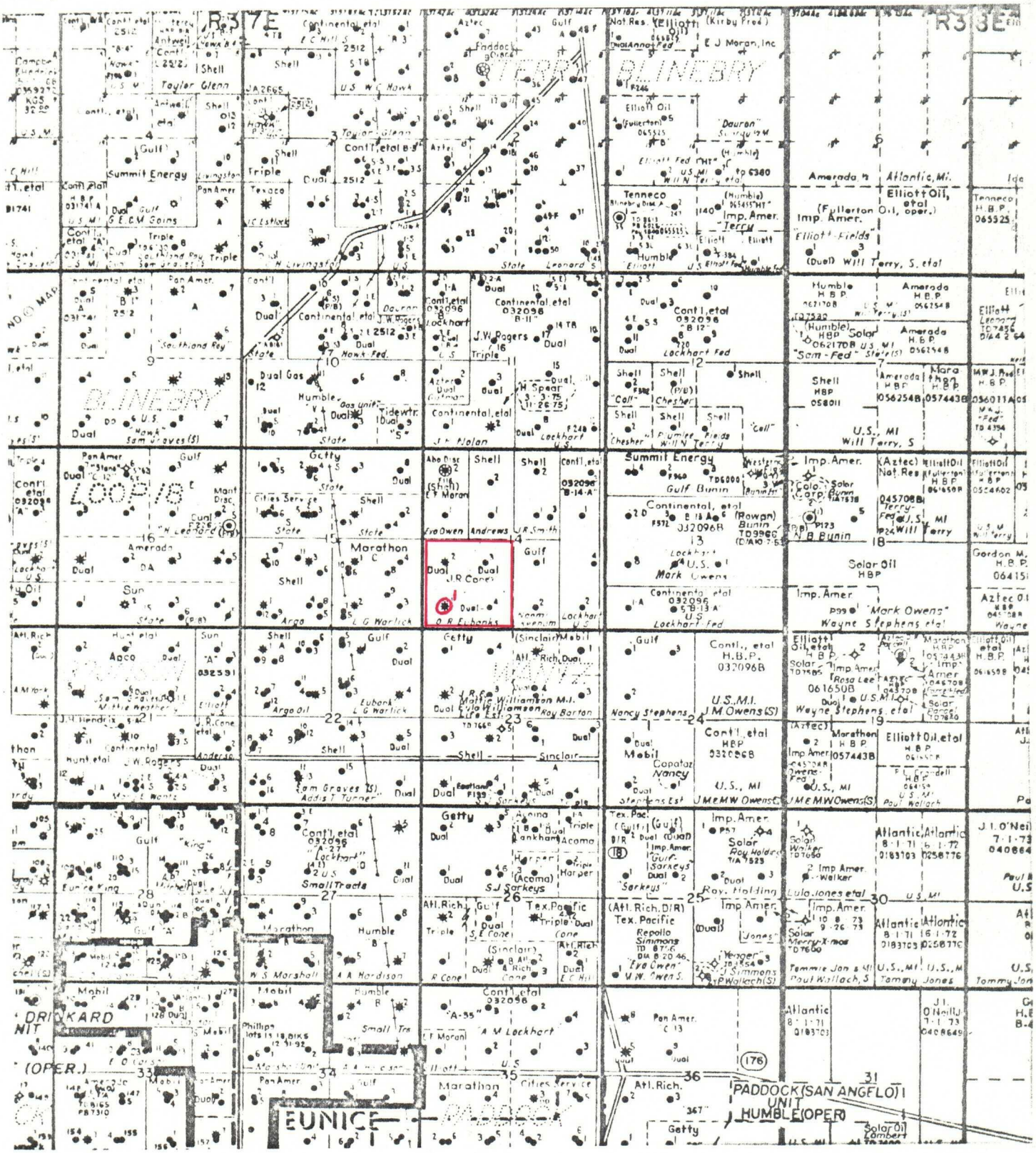
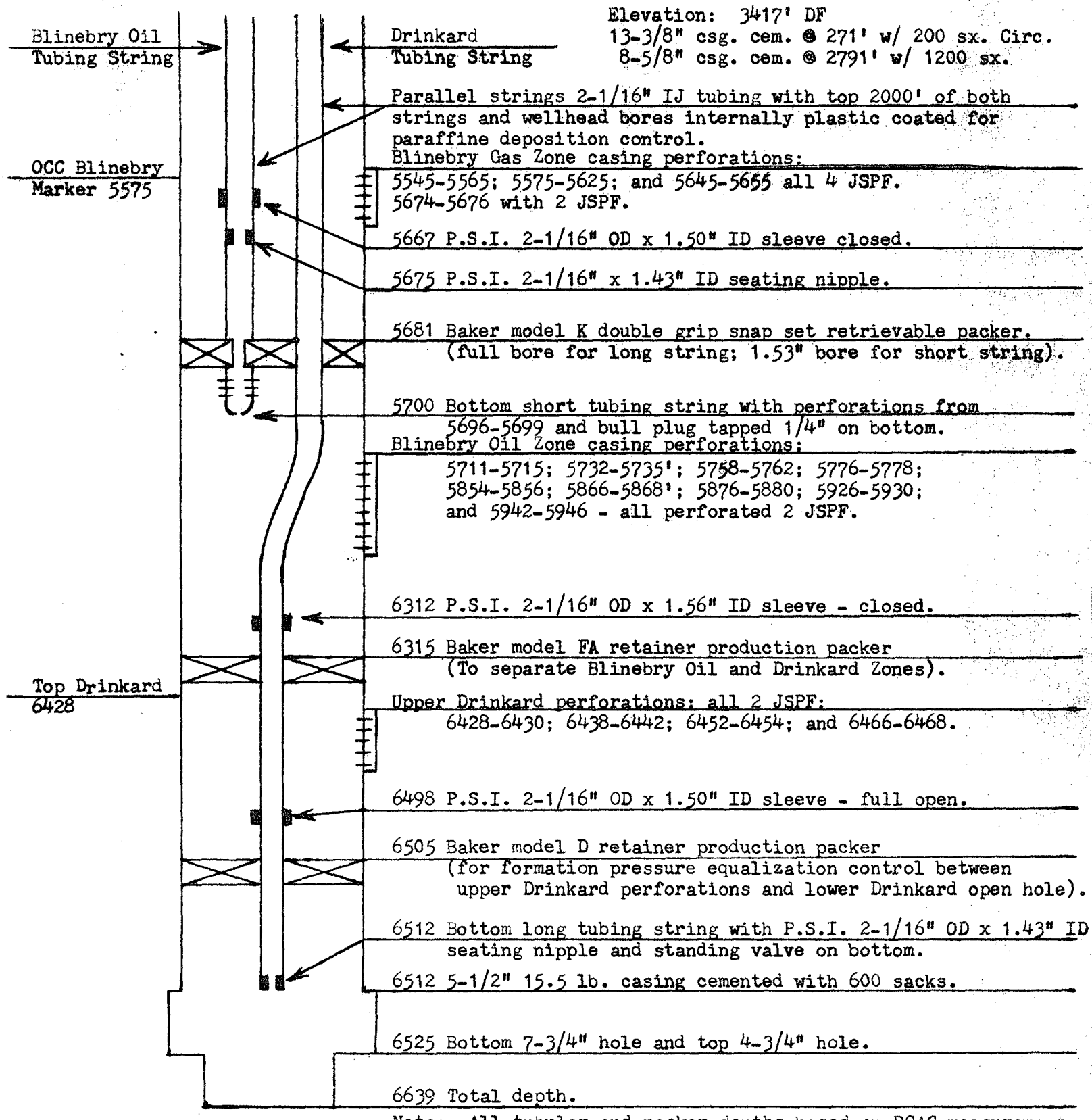
Midland, Texas 79701



Area Plat Showing
J. R. CONE Eubanks Lease
SW Sec. 14, T-21-S, R-37-E
Lea County, New Mexico
To Accompany Application for
Down-Hole Commingling
Blinebry Oil and Drinkard Pools

J. R. CONE Eubanks No. 1
C SW SW Sec. 14, T-21-S, R-37-E, Lea County, New Mexico
Diagrammatic Sketch of Down-hole Dual Completion Arrangement
Blinebry Oil and Drinkard Pools



Note: All tubular and packer depths based on PGAC measurements in setting Baker FA and D retainer packers.
This sketch shows mechanical data as of June 23, 1972.

To Accompany Application for Down-Hole Commingling - Blinebry Oil & Drinkard Zones

NEW MEXICO OIL CONSERVATION COMMISSION

GAS – OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
J. R. CONE	Blinebry Oil and Drinkard	Lea

Address	TYPE OF TEST – (X)	Scheduled ☐	Completion ☐	Special ☒
Box 871, Lubbock, Texas 79408				

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS – OIL RATIO CU.FT./BBL.
Eubanks	1	M	14	21	37											
		Blinebry Oil Zone				5/6/72	F	28/64	130	31	24	0.2	36.8	24	548.0	22,833
						6/20/72	F	30/64	110	31	24	0.0	35.6	21	549.0	26,143
		Drinkard				3/23/72	F	32/64	400-40	4	24	0.3	39.0	5	29.0	5,800
						6/21/72	F	32/64	380-40	4	24	0.2	38.2	2	84.0	42,000

To Accompany Application
for Down-Hole Commingling
Blinebry Oil and Drinkard Pools

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

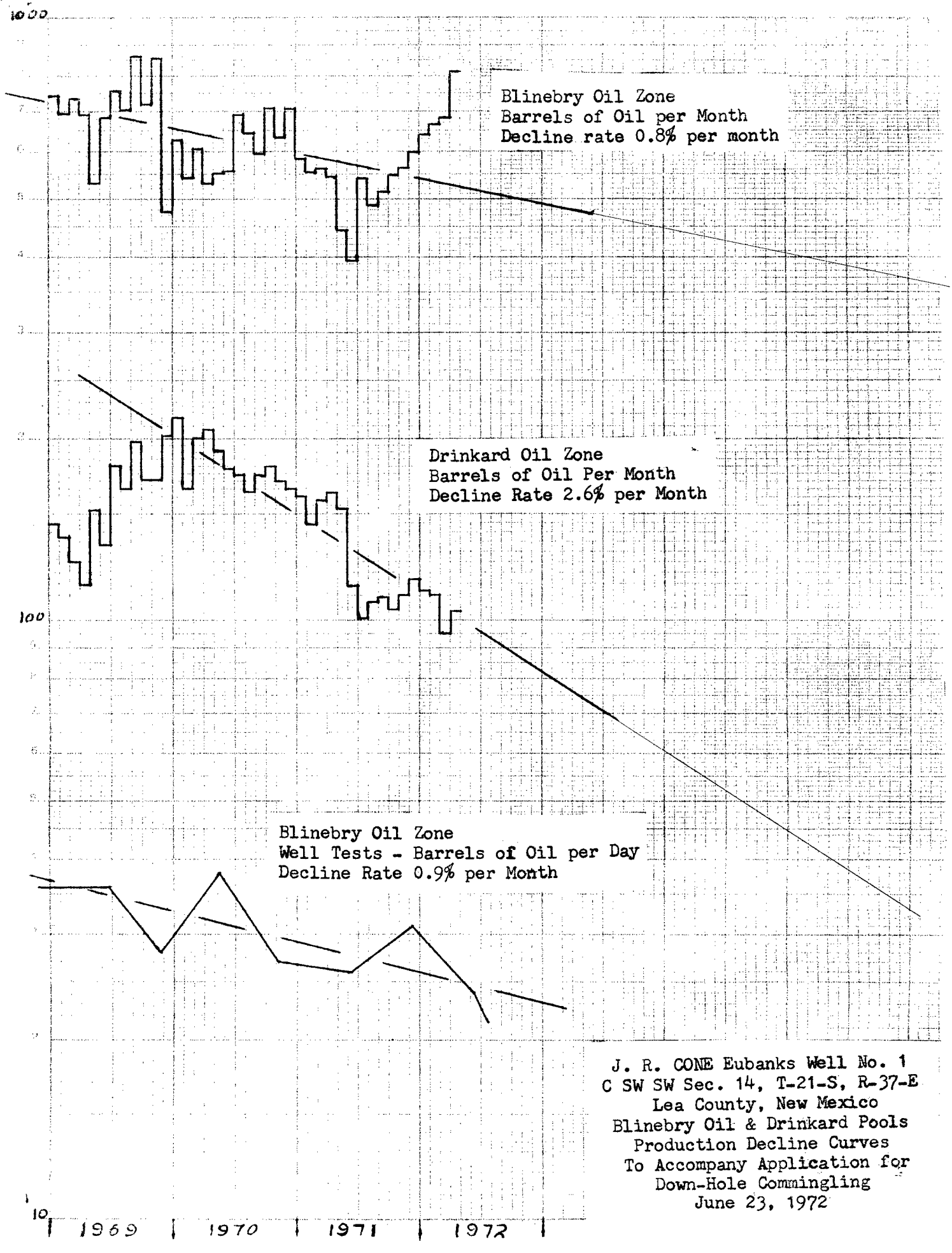
Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

L. O. Storm - L. O. Storm
(Signature)

Engineer
(Title)

June 22, 1972
(Date)



J. R. CONE Eubanks Well No. 1
C SW SW Sec. 14, T-21-S, R-37-E
Lea County, New Mexico
Blinebry Oil & Drinkard Pools
Production Decline Curves
To Accompany Application for
Down-Hole Commingling
June 23, 1972