

EXHIBITS for CASE NO. 4121
Application of Roger C. Hanks
for Special Pool Rules,
Bar "U" Field, Lea Co., N. M.

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
<u>App 1.</u>	EXHIBIT NO. <u>A</u>
CASE NO. <u>4121</u>	

Prepared by:
William J. LeMay
Consulting Geologist
Santa Fe, New Mexico

Case No. 4121
Exhibit No. 4

CHRONOLOGY AND SPACING OF COMMISSION ORDERS
FOR BOUGH "C" FIELDS

<u>Case No.</u>	<u>Date of Order</u>	<u>Field</u>	<u>Well Spacing</u>
1125	Oct. 10, 1956	Lane	80
1637	Aug. 26, 1959	Allison	80
1735	Aug. 26, 1959	Bluitt	80
2554	June 17, 1963	So. Lane	80
2635	Aug. 21, 1963	Inbe	80
2942	Mar. 15, 1965	Siminola	80
3003	May 6, 1965	Tobac	80
3261	Feb. 15, 1967	Jenkins	160
3513	Sept. 12, 1968	Vada	160
3559	May 6, 1968	So. Flying "M"	80
3889	Nov. 21, 1968	Middle Allison	160 (temporary)

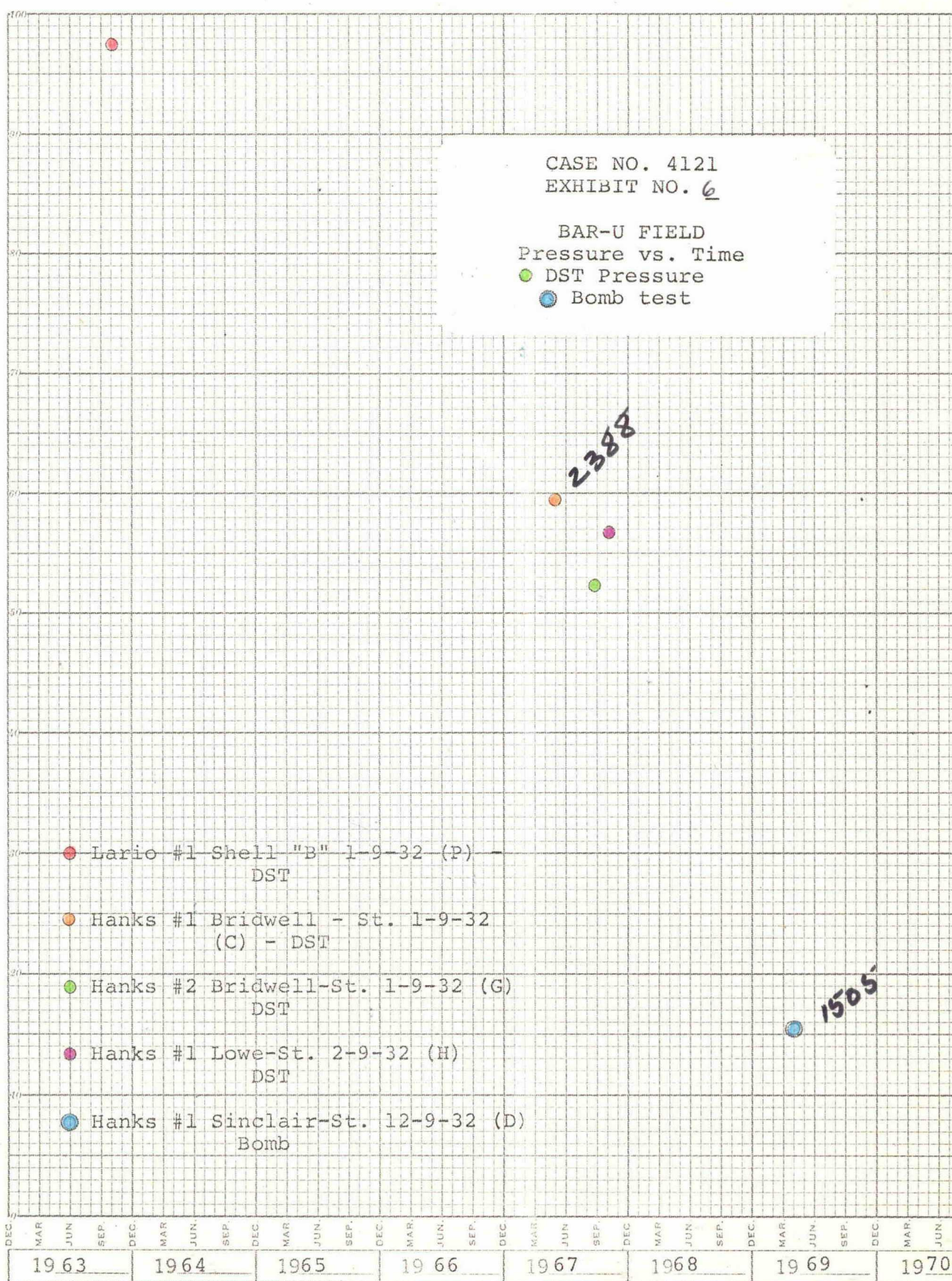


CASE NO. 4121
EXHIBIT OVERLAY
BOUGH "C" PRODUCTION AS
OF MAY 1, 1969.

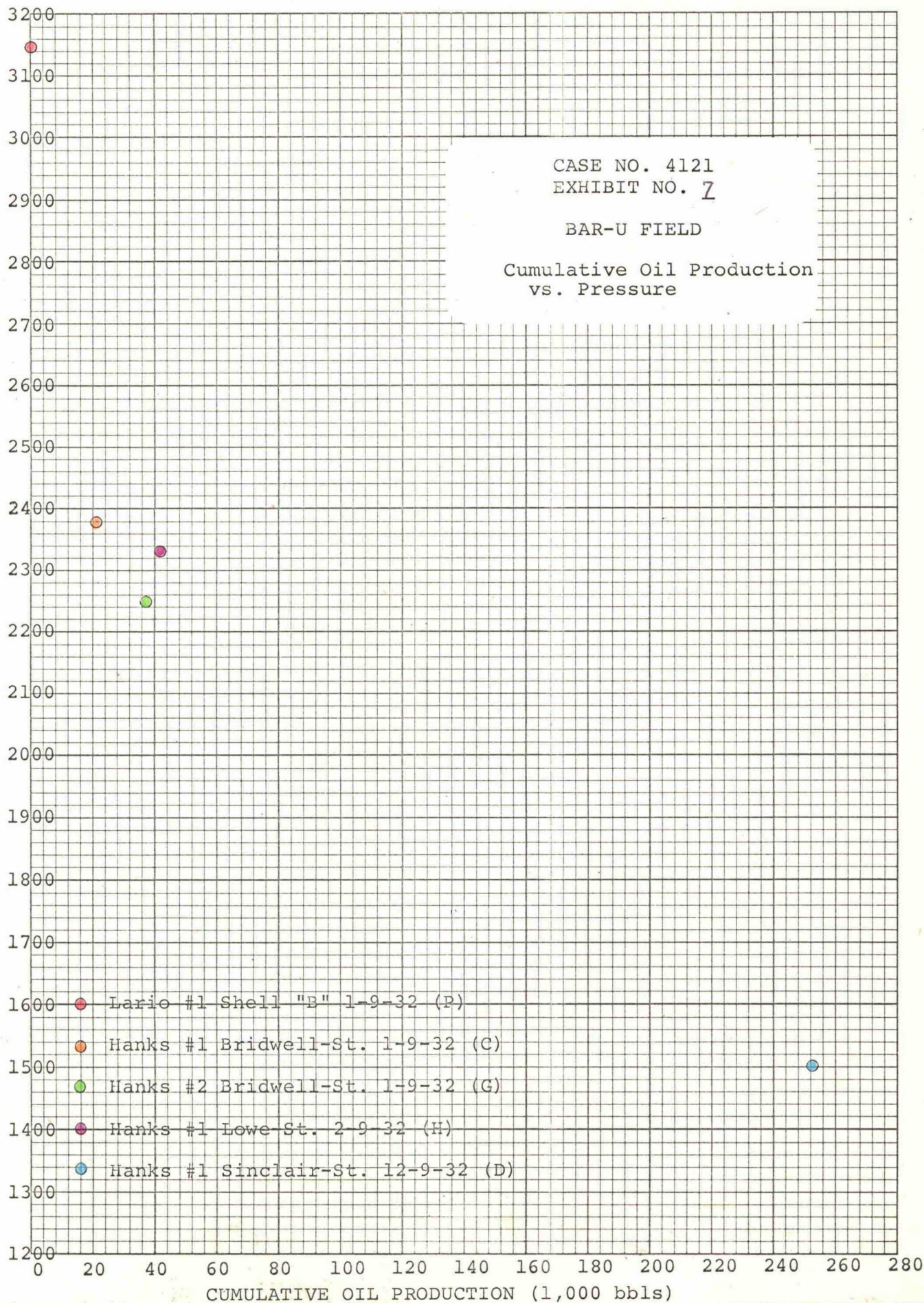


RESERVOIR PRESSURE - DST (-4720)

3200
3100
3000
2900
2800
2700
2600
2500
2400
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1000



RESERVOIR PRESSURE @ -4720



CASE NO. 4121
EXHIBIT NO. 8

BOUGH C RESERVOIR DATA IN BAR "U" FIELD

POROSITY	Range	5-10%
POROSITY	Average	8%
WATER SATURATION	Log calc.	35%
FORMATION VOLUME FACTOR		1.50
RECOVERY FACTOR	Estimate	40%
NET PAY	Range	6-12'
NET PAY	Average	10'
BUBBLE POINT		3200'
RESERVOIR PRESSURE @ ABANDONMENT		500
OIL GRAVITY		46° 20 ° API @ 60°
SOLUTION GOR		1000 CF/Bbl. (from production)
OIL IN PLACE		$= \frac{7758 \times 0.08 \times 0.65}{1.50}$
		= 269 Bbl/Acre Ft.
ESTIMATED ULTIMATE RECOVERABLE OIL		$= 269 \times 40\% \text{ or } 107 \text{ Bbl/Acre Ft.}$ $= 107 \times 10' \text{ or } 1070 \text{ Bbl/Acre}$ $= 85,600 \text{ Bbl/80 Acres}$ $= 171,200 \text{ Bbl/160 Acres}$
EXTIMATED % DEPLETED		$= \frac{3146 - 1505}{3146 - 500} \times 100 \text{ or } 62\%$
RECOVERABLE RESERVES @ 4/15/69 @ 38%		$= 32,528 \text{ Bbls/80 acres}$ $= 65,056 \text{ Bbls/160 acres}$
RECOVERABLE RESERVES @ 4/15/69 @ 50%*		$= 42,800 \text{ Bbls/80 acres}$ $= 85,600 \text{ Bbls/160 acres}$

* Derived From Exhibit No 726 Projection

CASE NO. 4121
EXHIBIT NO. 9

BAR "U" FIELD ECONOMICS

GROSS INCOME (OIL & GAS)	\$3.43/Bbl.
WORKING INTEREST INCOME @ 87.5%	3.00/Bbl.
OPERATING COSTS (.50) AND TAXES (.21)	.71/Bbl.
NET WORKING INTEREST INCOME (87.5%)	\$2.29/Bbl.
NET WORK INTEREST INCOME (75% W.I.)	\$1.86/Bbl.

ASSUMING NO DEPLETION OF RESERVES:

WELL SPACING	80	160
ESTIMATED RECOVERY - BBLS	85,600	171,200
TOTAL NET INCOME	\$196,024.	\$392,048.
DEVELOPMENT COST PER WELL	\$175,000.	\$175,000.
NET PROFIT PER WELL	\$ 21,024.	\$217,048.
RETURN ON INVESTMENT (87.5% W.I.)	1.20%	2.24%
NET INCOME (75% W.I.)	\$159,216.	\$318,432.
PROFIT OR (LOSS) PER WELL (75% W.I.)	(\$15,784.)	\$143,432.

ALLOWING FOR ESTIMATED DEPLETION OF RESERVES (87.5% W.I.)

ESTIMATED RECOVERY - BBLS	32,528	65,056
TOTAL NET INCOME ⁶² (38 % DEPLETION)	\$ 74,489.	\$148,978.
DEVELOPMENT COST PER WELL	\$175,000.	\$175,000.
NET PROFIT (LOSS) PER WELL	(\$100,511)	(\$26,022)
NET INCOME @ 50% DEPLETION	\$ 98,012.	\$196,024.
PROFIT OR (LOSS) @ 50% DEPLETION	(\$76,988)	\$ 21,024.

R33F

EXHIBIT 1
SHUT IN PRESSURES
BAR U (PENN) FIELD
LEA COUNTY, NEW MEXICO

Operator Well	Date	Shut In Time, Hrs.	Bottomhole Pressure @ -4600' psi
Roger C. Hanks			
Bridwell State No. 1 6143AS/14	5-16-69	50.0	1327
Bridwell State No. 2 11000P 5/16	5-16-69	71.2	1364
Sinclair State No. 1 6133H 5/14	4-17-69	74.0	1469
Lario Oil & Gas Company			
State "B" No. 1 6131AG/14	5-16-69	50.5	1390
State "B" No. 2 1141P 5/16	5-16-69	51.2	1348

Average on 5-16-69

1357

BEFORE EXAMINER NOTARY
OIL CONSERVATION COMMISSION
app. EXHIBIT NO. B-1
CASE NO. 7121

*estimate that static pressure was
571 on 5/16 if you extrapolate
from pressure in the well
on plate for 5/16*

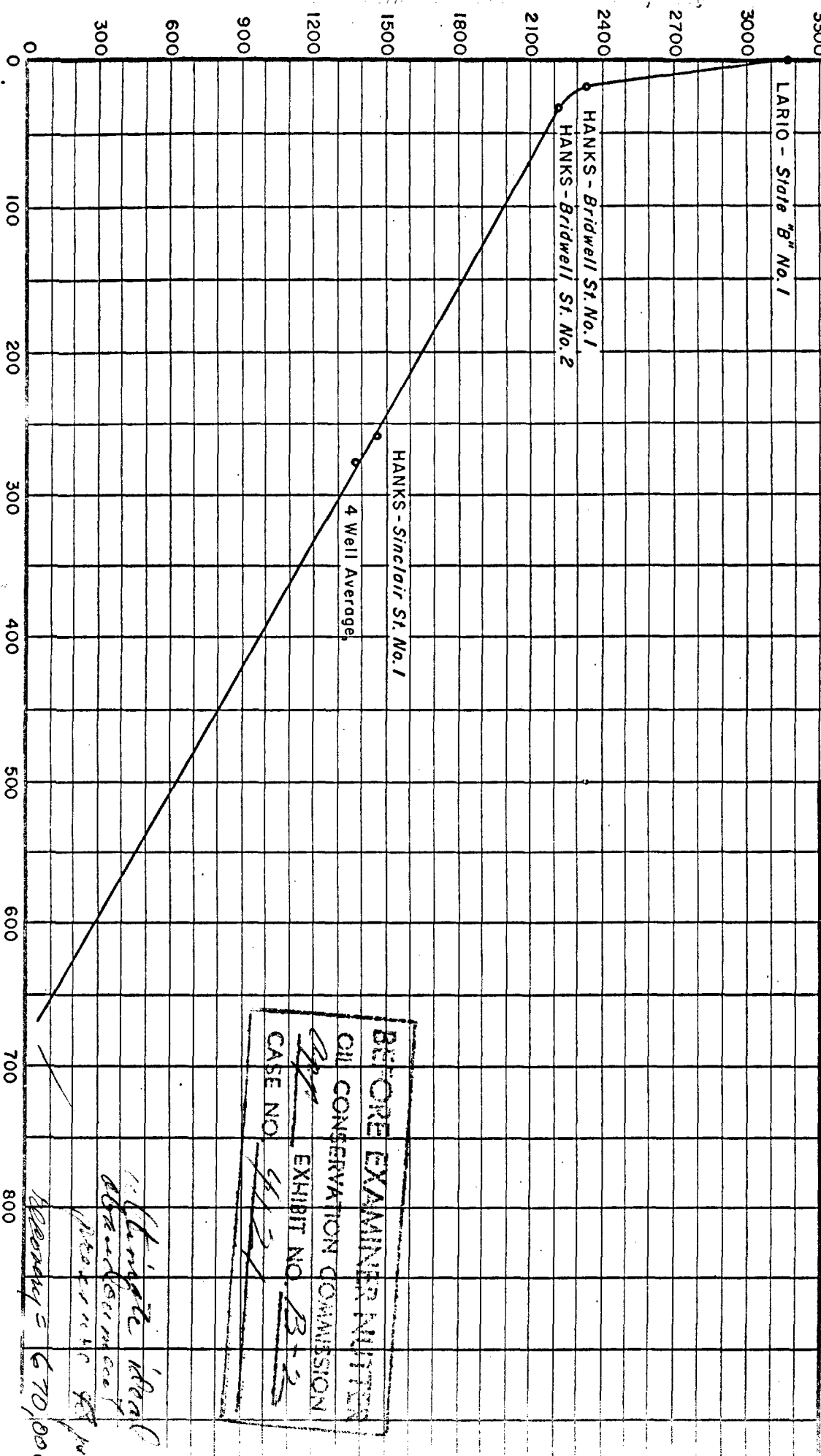
BAILEY, SIPES, WILLIAMSON & RUNYAN, INC.
1100 V & J TOWER MIDLAND, TEXAS 79701
L. D. SIPES, JR., P.E./zt JUNE 2, 1969

EXHIBIT 1

B-1

EXHIBIT 2

RESERVOIR PRESSURE vs CUMULATIVE PRODUCTION
 BAR U (PENN.) FIELD
 LEA COUNTY, NEW MEXICO



BEFORE EXAMINER NOTED
 OIL CONSERVATION COMMISSION
 CASE NO. 44-27
 EXHIBIT NO. B-2

11/1/40
670,000

EXHIBIT 3
CALCULATION OF THEORETICAL RESERVOIR
PRESSURE AT ABANDONMENT

Example Well Roger C. Hanks-Bridwell State No. 2

Abandonment Conditions:

Oil rate, Bbl/D	23
Water rate, Bbl/D	2
Fluid viscosity, cp	0.60
Formation capacity, Md. ft.	425
Wellbore pressure, psi	0

For 160 acre spacing

$$P_e - P_w = \frac{Q \mu \ln r_e/r_w}{7.07 kh}$$

$$P_e - 0 = \frac{[23 (1.2) + 2] 0.60 \ln (1491/0.5)}{(7.07) (0.425)}$$

$$P_e = \frac{(30) (0.60) (8.0)}{(7.07) (0.425)}$$

$$P_e = \underline{\underline{48 \text{ psi}}}$$

For 80 acre spacing

$$P_e - P_w = \frac{[23 (1.2) + 2] 0.60 \ln (1110/0.5)}{(7.07) (0.425)}$$

$$P_e - 0 = \frac{(30) (0.60) (7.7)}{(7.07) (0.425)}$$

$$P_e = \underline{\underline{46 \text{ psi}}}$$

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

App. EXHIBIT NO. B-3

CASE NO. 4121

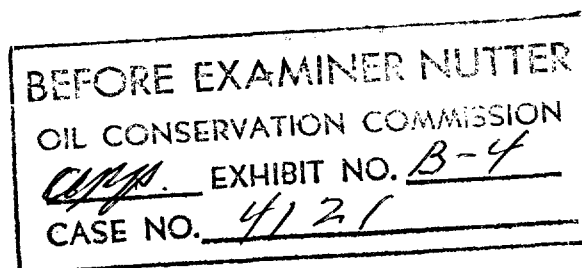
BAILEY, SIPES, WILLIAMSON & RUNYAN, INC.
1100 V & J TOWER MIDLAND, TEXAS 79701
L. D. SIPES, JR., P.E./zt JUNE 2, 1969

EXHIBIT 3

EXHIBIT 4
BOUGH C RESERVOIR DATA
BAR U (PENN) FIELD
LEA COUNTY, NEW MEXICO

From performance data:

Cumulative production 5-16-69 =	277,579
Reservoir pressure 5-16-69 =	1,390
Reservoir pressure @ abandonment =	48 psi
Recovery factor =	294 STB/psi
Maximum Remaining Reserves 5-16-69 =	294 (1380-48)
=	392,000 STB
Average reserves on 5-16-69 for current wells =	78,400 STB



BAILEY, SIPES, WILLIAMSON & RUNYAN, INC.
1100 V & J TOWER MIDLAND, TEXAS 79701
L. D. SIPES, JR., P.E./zt JUNE 2, 1969

EXHIBIT 4

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. B-5
CASE NO. 4121

EXHIBIT 5

WELL ECONOMICS
BAR U (PENN) FIELD

Calculation of Gross Income for Average Well with 87.5% Working
Interest Assuming No Depletion of Reserves

Ultimate Recovery for Field =

670,000 Bbl.

Well Spacing, Acres	<u>80</u>	<u>160</u>
Number of Wells	10	5
Average Ultimate Recovery per Well, Bbl.	67,000	134,000
Gross Revenue, \$	201,000	402,000
Economic Life, Years	2.5	5
Operating Costs @ \$2,060/Month	61,750	123,500
Total Net Revenue, \$	139,250	278,000
Development Cost, \$	205,000	205,000
Net Profit (Loss), \$	(65,750)	73,500

Calculation of Gross Income for an Average Well with 87.5% Working
Interest Drilled 5-16-69

Well Spacing, Acres	<u>80</u>	<u>160</u>
Number of Wells	10	5
Maximum Remaining Reserves, Bbl.	392,000	392,000
Average Remaining Reserves, Bbl.	39,200	78,400
Gross Revenue, \$	117,500	235,000
Economic Life, Years	2	4
Operating Costs @ \$2,060/Month	49,500	99,000
Total Net Revenue, \$	68,000	136,000
Development Cost, \$	205,000	205,000
Net Profit (Loss), \$	(137,000)	(69,000)

BAILEY, SIPES, WILLIAMSON & RUNYAN, INC.
1100 V & J TOWER MIDLAND, TEXAS 79701
L. D. SIPES, JR., P.E./zt JUNE 2, 1969

EXHIBIT 5

BAR U Field hien Country New Mexico

PRESSURES - MAY 14-16 1969 Survey

WELL NUMBER	PERFORATIONS	MEASUREMENT DEPTH (FROM D/ELEVATION)	D.F. ELEVATION	MEASURED PRESSURE (PSI)	GRADIENT USED (PSI/ft)	DEPTH CORRECTION feet	DATUM PRESSURE (-4794) psi
LARIO STATE B-1	9210-12	9211	4417	1454	-	-	1454
LARIO STATE B-2		9100	4415 (EST)	1382	0.40	109	1426
ROGER HARRIS BRIDWELL No 1	9137-40	9100	4411	1356	0.45	105	1402
ROGER HARRIS BRIDWELL No 2	9053-67	8980	4423	1333	0.40	237	1428
							1427.5

$$\bar{X}_{n=4}$$

BEFORE EXAMINER MUTTER
OIL CONSERVATION COMMISSION
McElroy
EXHIBIT NO. R-1
CASE NO. 4121

Exhibit No 1

6/3/69
Viney

Exhibit No 2

PRESSURE DATA - BAR U Field. Lea County New Mexico

<u>OPERATOR, LEASE & WELL Number</u>	<u>DATE OF TEST</u> (MONTH - YEAR)	<u>RECORDED PRESSURE</u>	<u>FLUID GRADIENT USED</u>	<u>DEPTH CORRECTION</u>	<u>DATUM PRESSURE</u> ① - 4794
HARD Statz "B" No 1	9-1963	2967	-	-	2967.
Roger Hanks Bridwell State No 1	5-1967	2388	0.45	105	2434
Roger Hanks Bridwell State No 2	9-1967	2245	0.40	237	2340.
HARD State B No 1	5-1969	1454	-	-	1454.

EXHIBIT No 3

PRESSURE & PRODUCTION DATA BAR U FIELD LEA COUNTY NEW MEXICO.

<u>DATE</u> MONTH - YEAR	<u>DATUM PRESSURE</u> psi @ (- 4794)	<u>Δ PRESSURE</u> psi	<u>CUMULATIVE OIL</u> - barrels -	<u>CUMULATIVE FLUID</u> - barrels -
9-1963	2967	-	-	-
5-1967	2434	533 ✓	27,000	156,000
9-1967	2340	627	47,000	223,000
5-1969	1454	1513	267,000 (EST)	855,000 (EST)

6/3/1969
RWD

BEFORE EXAMINER NOTED
OIL CONSERVATION COMMISSION
McQuinn EXHIBIT NO. R-2 & R-3 & R-4
CASE NO. 4121

actually
there is no.
No. 4 - go to 5.

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

McHenry EXHIBIT NO. R-5

CASE NO. 4121

BAR U Field

Lea County New Mexico

DIFFERENTIAL PRESSURE
VS Cumulative oil &
Fluid Production

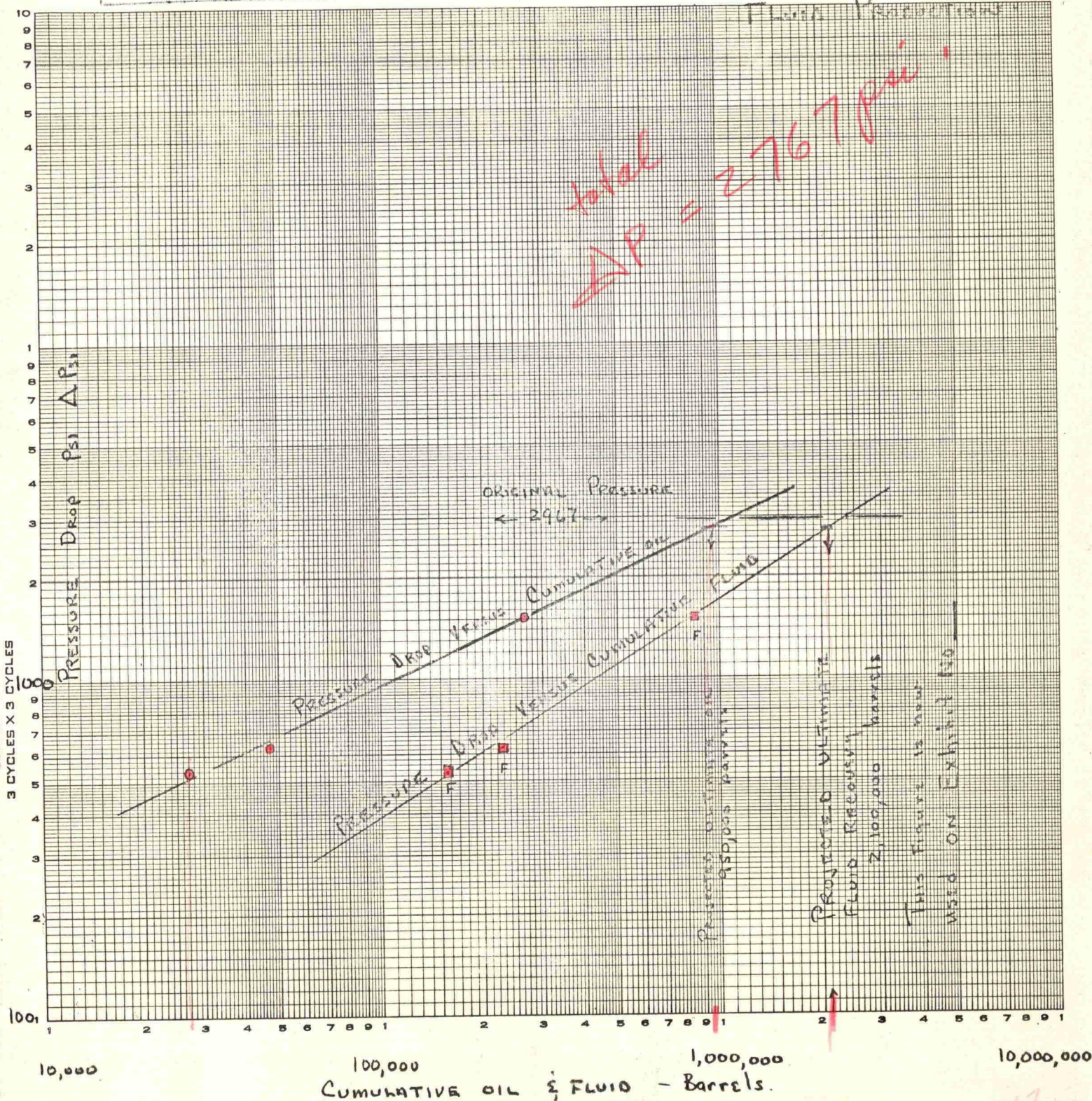
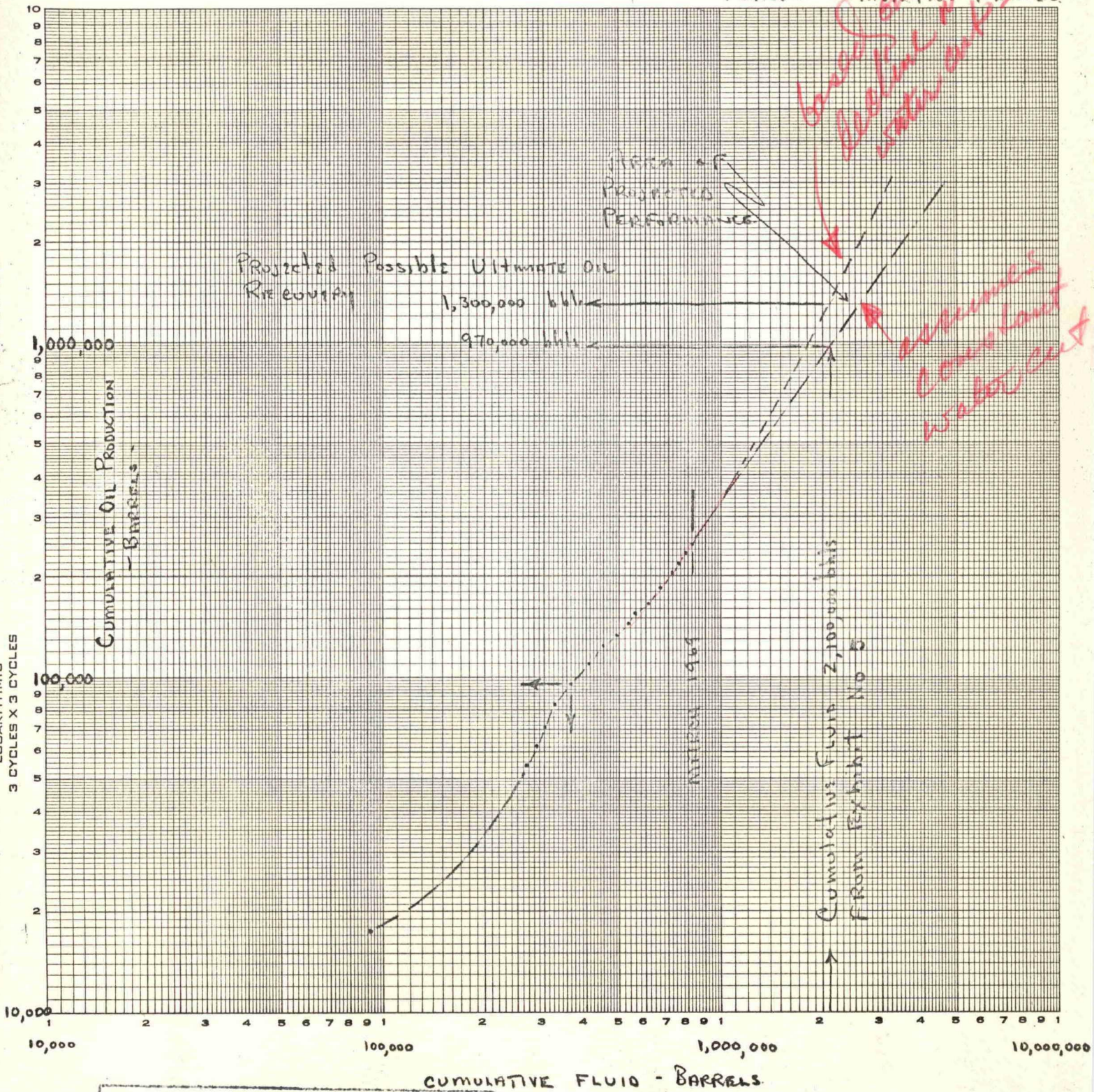


Exhibit No. 5

BAR U Field
 Lea County New Mexico.

Cumulative oil production
 VERSUS Cumulative Fluids

NO. 340R-L33 DIETZGEN GRAPH PAPER
 LOGARITHMIC
 3 CYCLES X 3 CYCLES
 EUGENE DIETZGEN CO.
 MADE IN U. S. A.



BEFORE EXAMINER NUTTER
 OIL CONSERVATION COMMISSION
 EXHIBIT NO. B-6
 CASE NO. 4121

RHR
 6/3/69

Exhibit No 6

BAR U FIELDS Lea County New Mexico.

Summary of Oil, Water & Total Fluid Production

Year and/or Month	Oil Production - Barrels		Water Production - Barrels	
	Period	Cumulative	Period	Cumulative

1966	17474	17474	73179	73179
	37400	54874	138569	211748
1967				
1968				
1969				

1969				
Jan	15438	248751	531977	750728
F	12687	231438	552541	783979
March	17603	249041	573862	822903

Total Fluid - Barrels	
Period	Cumulative

90653	90653
175969	266622
16441	283113
16650	299763
21311	321074
38412	359486
46612	406098
41445	448043
41487	490038
40242	530322
25687	556009
56151	612160
50593	662753
50959	713712

37016	750728
33251	783979
38924	822903

NOTE: Gas production not tabulated due to incomplete reporting of gas produced prior to pipeline connection.

BEFORE EXAMINER NOTED
OIL CONSERVATION COMMISSION
McGraw EXHIBIT NO. R-7
CASE NO. 4121

NO. OF COPIES RECEIVED	
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SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE O. C. C.
APR 16 2 14 PM '69

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease STATE ☒ FEE ☐
5. State Oil & Gas Lease No. OG-3920
7. Unit Agreement Name None
8. Farm or Lease Name Bridwell-State
9. Well No. 1.
10. Field and Pool, or Wildcat Bar-U
12. County Lea
19. Proposed Depth 9,200'
19A. Formation Bough "C"
20. Rotary or C.T. Rotary
21. Elevations (Show whether DF, RT, etc.) Single Well - New Mexico (USF&G Co.)
21B. Drilling Contractor Not awarded
22. Approx. Date Work will start May 15, 1969.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK	
1a. Type of Work DRILL ☒ DEEPEN ☐ PLUG BACK ☐	7. Unit Agreement Name None
b. Type of Well OIL WELL ☒ GAS WELL ☐ OTHER ☐ SINGLE ZONE ☒ MULTIPLE ZONE ☐	8. Farm or Lease Name Bridwell-State
2. Name of Operator Eugene McElvaney, Jr.	9. Well No. 1.
3. Address of Operator 859 Petroleum Building, 200 West 1st. St., Roswell, New Mexico 88201	10. Field and Pool, or Wildcat Bar-U
4. Location of Well UNIT LETTER B LOCATED 660 FEET FROM THE North LINE AND 1,980 FEET FROM THE East LINE OF SEC. 1 TWP. 9 South RGE. 32 East NMPM	12. County Lea
23. PROPOSED CASING AND CEMENT PROGRAM	

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17-1/2"	11-3/4"	@32#	310'	350	Circ
12"	8-5/8"	24-32#	3,650'	300	
7-7/8"	5-1/2"	16#	9,200'	300	

Operator will drill with rotary rig to depth sufficient to test the Bough "C" formation, and will attempt completion if commercial production is indicated.

BEFORE EXAMINER NL
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4121
CASE NO. 4121

THE COMMISSION MUST BE NOTIFIED
24 HOURS PRIOR TO RUNNING
CASING.

APPROVAL VALID
FOR 90 DAYS UNLESS
DRILLING COMMENCED,
EXPIRES 7-17-69

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed Eugene McElvaney, Jr. Title _____ Date April 15, 1969.

(This space for State Use)

APPROVED BY [Signature] TITLE SUPERVISOR DISTRICT 1 DATE APR 17 1969

CONDITIONS OF APPROVAL, IF ANY:

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundary of the lease.

Operator EUGENE McELVANEY, JR.			Lease BRIDWELL		Well No. 1
Unit Letter B	Section 1	Township 9 SOUTH	Range 32 EAST	County LEA	

Actual Footage Location of Well:

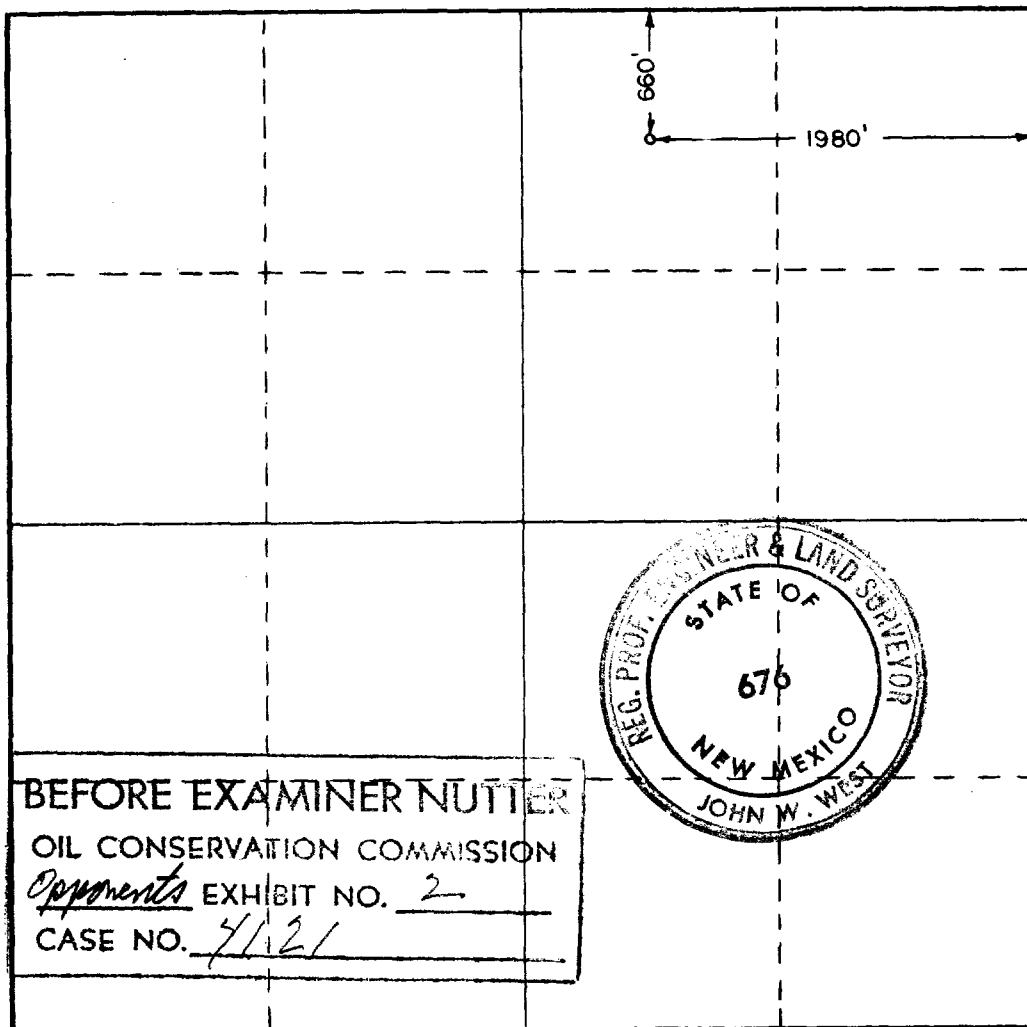
660 feet from the NORTH line and		1980 feet from the EAST line	
Ground Level Elev. 4406	Producing Formation BOUGH "C"	Pool BAR - U	Dedicated Acreage: 80.19 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Opponents EXHIBIT NO. 2
CASE NO. 7121

CERTIFICATION

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

John W. West
Name
AGENT

Position
EUGENE McELVANEY, JR.

Company
APRIL 15, 1969

Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
APRIL 15, 1969

Registered Professional Engineer and/or Land Surveyor

John W. West
Certificate No. **676**



FARMOUT AGREEMENT

April 19, 1969

Mr. Eugene McElvaney, Jr.
Petroleum Building
Roswell, New Mexico 68201

Dear Mr. McElvaney:

In consideration of the benefits to accrue to the parties hereto and the covenants and obligations to be kept by you, it is hereby mutually agreed as follows:

I. We represent, without Warranty of Title of any kind or character, that we hold an Oil and Gas lease on minerals described as follows:

The North Half of the Northeast One-Fourth (N/2 of NE/4) and the South Half of the Northwest One-Fourth (S/2 of NW/4) of Section 1, Township 9 South, Range 32 East, Lea County, New Mexico.

We agree to deliver to you copies of such title papers as we have in our files at this time, and at your sole risk and expense you agree to conduct such title examination and secure such Curative Matter as is necessary to satisfy yourself that the title is acceptable to you.

II. (A) TEST WELL: On or before the 1st day of June, 1969, you agree to commence or cause to be commenced the actual drilling of a well for oil and/or gas at the following location:

At a location of your choice which is acceptable to the New Mexico Conservation Commission either in N/2 NE/4 or S/2 NW/4 Section 1, Township 9 South, Range 32 East,

and you further agree to drill said test well with due diligence in a workmanlike manner to a depth sufficient to thoroughly test the following:

The Bough "C" Pennsylvanian Formation which is found at approximately 9400 feet.

(B) COMPLETION OR ABANDONMENT: When the Test Well has reached its total depth, you agree:

- (1) That if the well can be completed as a producer of oil and/or gas to diligently prosecute the completion of said well without unreasonable delays; or
- (2) If you determine to abandon the well, you will promptly furnish us with an appropriate electrical log acceptable to us, and you further agree that you will not abandon the well as a dry hole until you have furnished us said electrical log and thereafter given us at least 48 hours notice of your intention to abandon, unless we consent to an earlier abandonment thereof. After consent has been given, you agree to promptly plug and abandon the Test Well in accordance with all the requirements of any governmental body having jurisdiction.
- (3) You agree to complete this Test Well as a commercial oil and/or gas well or plug and abandon, as the case may be, no later than 60 days from commencement date of Test Well.

BEFORE EXAMINER NOTED
OIL CONSERVATION COMMISSION
EXHIBIT NO. _____
CASE NO. <u>4/11</u>

Continued/

III. The only consequence of your failure to drill the proposed Test Well hereinabove provided for shall be the ipso facto cancellation of this Agreement in its entirety.

IV. COMMITMENT:

Upon written request, we agree:

To furnish you with an assignment to the following tracts, or with an assignment of operating rights to the following tracts, with these provisions and reservations:

TRACT "A" South half of the Northwest One Fourth (S/2 NW/4)
with a reservation of one-eighth of eight-eighths (1/8 of 8/8)
free overriding royalty interest;

TRACT "B" North half of the Northeast one-fourth (N/2 NE/4)
with a reservation of one-eighth of eight-eighths (1/8 of 8/8)
free overriding royalty interest;

both tracts being in Section 1, Township 9 South, Range 32 East, Lea County, New Mexico. There is also the provision that production must be established in paying quantities on each tract before the assignment is earned, and the assignment on each tract will be limited to a depth of not more than 100 feet below the depth drilled on such tract. A test must be commenced on the remaining tract within 90 days after completion of Test Well. The consequence of your failure to begin said second well in the allotted time will be the cancellation of the Agreement as to the remaining undeveloped tract.

V. As a further express consideration for this Agreement, and not as a covenant only, you agree to furnish to:

Bridwell Oil Company
Attn: Mr. Ralph S. Bridwell
P. O. Box 2038
Abilene, Texas 79604

Bridwell Oil Company
Attn: Paul Schoppa, Jr.
P. O. Drawer 1830
Wichita Falls, Texas 76307

the following on all wells drilled:

- (1) Daily drilling report on the progress of the well which shall include drilling depth, information on all tests, including character, thickness, name of any formation penetrated, shows of oil, gas or water and detailed reports on all drill stem tests and cores.
- (2) 1 Certified copy of all forms furnished to any governmental authority.
- (3) 2 Copies of all electrical logging surveys.
- (4) 2 Certified copies of the well log upon completion.
- (5) 1 Certified copy of the plugging record, if any.
- (6) Samples of all cores and cutting, if so requested.

VI. You agree to properly drill stem test any and all formations in which shows of oil and/or gas are encountered after notifying us of the proposed test, and if we desire to be present during testing, you will delay such testing a reasonable amount of time in order to allow our representative to reach the well and witness the test, and you also agree to notify us

immediately by telephone or telegraph as to the results of any such test. You agree to run an electrical log from bottom of surface pipe to total depth and notify us in sufficient time to have a representative present during such logging. Notification shall be given to:

Mr. Ralph S. Bridwell
P. O. Box 2038
Abilene, Texas 79604

Telephone: A/C 915 673-6453
Night : A/C 915 692-8560

VII. It is agreed that from and after the date of this Agreement we will pay any delay rentals which may become due on the Oil and Gas Lease, subject to this Agreement, and thereafter bill you for the amount of delay rental paid by us and reimbursement for these rentals shall be made within fifteen days after receipt of statement.

VIII. This Agreement is personal in nature and may not be assigned without our written consent. When requesting consent to make an assignment of all or a portion of this Agreement, you will advise us as to the parties to whom the assignment will be made.

IX. In the drilling of the Test Well or Wells and otherwise complying with the terms and provisions of this Agreement, you are acting independently of us and not as a partner in any capacity, mining or otherwise. We shall have no responsibility whatsoever in connection with the drilling of said well and it shall be drilled at your sole cost, risk and expense. You agree to hold us harmless from any and all debts, claims or damages incurred in connection with the performance of this Agreement.

In regard to all provisions of this Agreement, it is understood and agreed that time is of the essence.

X. If production is obtained on any tracts described in Article IV, a notice of 90 days shall be given to Bridwell Oil Company prior to the plugging of same.

If the terms and provisions of this Agreement in its entirety are acceptable to you, will you kindly indicate your approval by signing below in the space provided and return two executed copies of this Agreement to us within ten days? Failure to do so will result in the cancellation of this Agreement at our option.

Yours truly

BRIDWELL OIL COMPANY

By: Ralph S. Bridwell

THIS AGREEMENT is APPROVED
and ACCEPTED this 24th day
of APRIL, 1969

Eugene McElvaney, Jr.
Eugene McElvaney, Jr.

PROPOSED DRILLING AND EXPENDITURES
FOR BAR-U FIELD 9,200' BOUGH "C" WELL

INTANGIBLES:

<u>Item Description</u>	<u>Completed Well Cost</u>
Surveying	\$ 150
Build Location & Roads	2,000
Drilling 9,200' @ \$5.50/Ft.	50,600
Daywork - 3 days @ \$1,200	3,600
Completion - 3 days @ \$800	2,400
Muds and Chemicals	3,500
Logging	3,500
1 Drill Stem Test	1,500
Acid - @ 2,000 Gal.	1,200
Perforating	1,200
Well Supervision	400
Cement Surface - 350 sx.	800
Cement Intermediate - 300 sx.	1,600
Cement Production - 300 sx.	1,400
Surface Damage	500
Administrative Overhead	500
Engr. & Geological Services	2,500
Contract Labor	1,500
Trucking	1,200
Sub-Total	\$ 80,050

TANGIBLES:

Casting (Size, amount, & Price):	
11-3/4" - 310' - \$4/ft	\$ 1,240
8-5/8" - 3,650' - \$3.67/ft	13,400
5-1/2" - 9,200' - \$2.80/ft	25,760
Tubing - 2-7/8" - 9,200' - \$1/ft	9,200
Float Equipment	
Surface 11-3/4"	100
Intermediate 8-5/8"	150
Production 5-1/2"	100
Scratchers & Centralizers:	
11-3/4"	50
8-5/8"	50
5-1/2"	300
Wellhead Equipment:	
11-3/4" x 12" x 600; 10" - 12" x 600	750
6" x 10" x 600; 6" x 600 Tree	1,750
Pumping Unit - Kobe	@ 35,000
Packers & Plugs (5 1/2" - Model R-DG)	750
Flow Line - 400' 2-7/8" O.D.	200
Flow Line Valves & Fittings	300
Wellhead Valves & Fittings	200
Storage Tanks (2-500 bbl.)	2,600
Separator	1,200
Walkway & Stairs	150
Water Treating Equipment (Circulating Pump)	400
Injection Equipment (Chemical Injector)	200
Sub-Total	\$ 93,850

TOTAL COMPLETED WELL COST

\$173,900

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

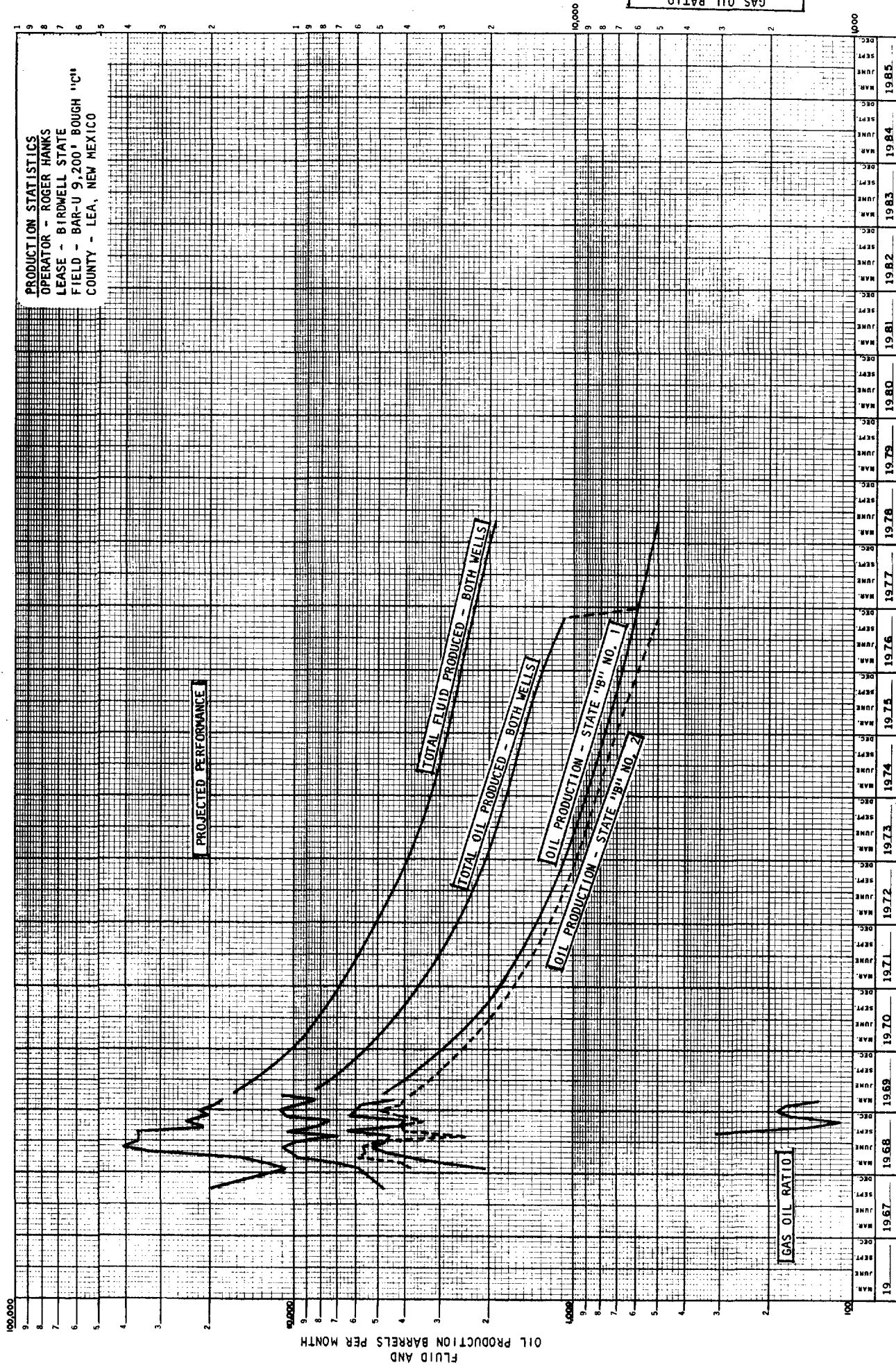
Opponent **EXHIBIT NO. 4**

CASE NO. 412

PRODUCTION STATISTICS
BAR-U FIELD 9,200' BOUGH "C"
LEA COUNTY, NEW MEXICO

Roger Hanks Bridwell State Lease Well #1G Section 1 T9S-R32E				Roger Hanks Bridwell State Lease Well #2C Section 1 T9S-R32E			
YEAR	OIL PRODUCTION BARRELS	WATER PRODUCTION BARRELS	GAS PRODUCTION MCF	OIL PRODUCTION BARRELS	WATER PRODUCTION BARRELS	GAS PRODUCTION MCF	
1967	16,389			9,800			
1968							
January	2,070	3,450		3,803	1,400		
February	2,940	4,200		4,168	1,450		
March	3,722	4,650		5,979	1,500		
April	4,680	20,800		5,579	1,400		
May	5,210	28,050		5,659	1,500		
June	4,725	25,245		5,025	1,400		
July	4,566	28,080		2,420	1,100		
August	6,441	24,300		4,014	1,500		
September	4,031	11,610		4,145	1,250	11,964	
October	4,007	15,550		3,440	1,350	8,400	
November	6,390	8,700	17,761	4,209	1,260		
December	6,190	9,300	20,850	4,960	1,400		
	54,972	183,935	38,611	53,401	16,510	20,364	
1969							
January	5,719	8,050	17,444	4,170	1,550		
February	4,371	8,300	11,068	4,005	1,400		
	10,090	16,350	28,512	8,175	2,950		
Totals 3-1-69	81,451	200,285	67,123	71,376	19,460	20,364	

PRODUCTION STATISTICS
 OPERATOR - ROGER HANKS
 LEASE - BIRDWELL STATE
 FIELD - BAR-U 9,200' BOUGH "C"
 COUNTY - LEA, NEW MEXICO



GAS OIL RATIO
 CUBIC FEET PER BARREL

PRODUCTION STATISTICS
BAR-U FIELD 9,200' BOUGH "C"
LEA COUNTY, NEW MEXICO

Lario State B Lease Well #1 P Section 1 T9S-R32E

Lario State B Lease Well #2 K Section 1 T9S-R32E

YEAR	OIL PRODUCTION BARRELS	WATER PRODUCTION BARRELS	GAS PRODUCTION MCF	OIL PRODUCTION BARRELS	WATER PRODUCTION BARRELS	GAS PRODUCTION MCF
1966	17,474					
1967	11,204					
1968						
January	1,512	4,256	2,673			
February	2,436	2,436	2,574			
March	2,716	2,744	3,954			
April	3,033	2,920	4,416			
May	3,105	3,038	4,521			
June	2,708	2,842	3,943			
July	2,881	2,940	4,195			
August	1,587	2,450	2,311			
September	2,201	2,450	3,205			
October	2,302	2,842	2,991	2,700	24,000	5,049
November	3,300	2,940	4,290	3,974	19,920	5,090
December	2,922	2,548	3,799	3,718	19,920	4,995
	30,703	34,406	42,872	10,292	36,840	15,024
1969						
January	2,497	1,333	3,265	3,052	10,695	3,991
February	3,233	1,204	4,202	1,078	9,660	1,416
March	2,680	1,333	3,178	3,275	14,818	4,270
	8,410	3,870	10,645	7,405	35,173	9,677
Totals 4-1-69	67,791	38,276	53,517	17,697	72,013	24,701

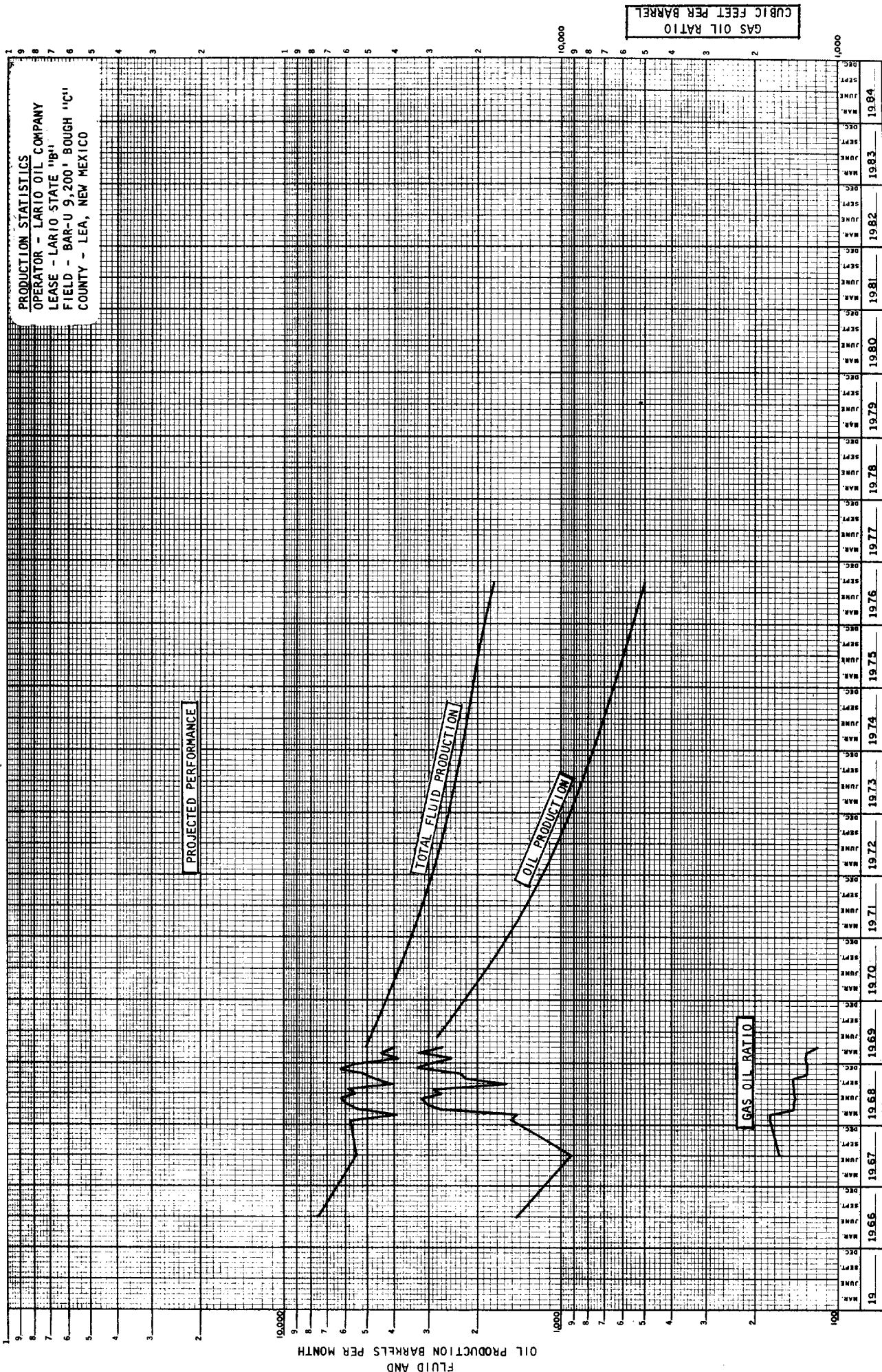
Using
44
44
55

50,000
888

52
50,000
4,840
1,600

52,000
68
120,000

PRODUCTION STATISTICS
 OPERATOR - LARIO OIL COMPANY
 LEASE - LARIO STATE "18"
 FIELD - BAR-U 9,200' BOUGH "C"
 COUNTY - LEA, NEW MEXICO



GAS OIL RATIO
 CUBIC FEET PER BARREL

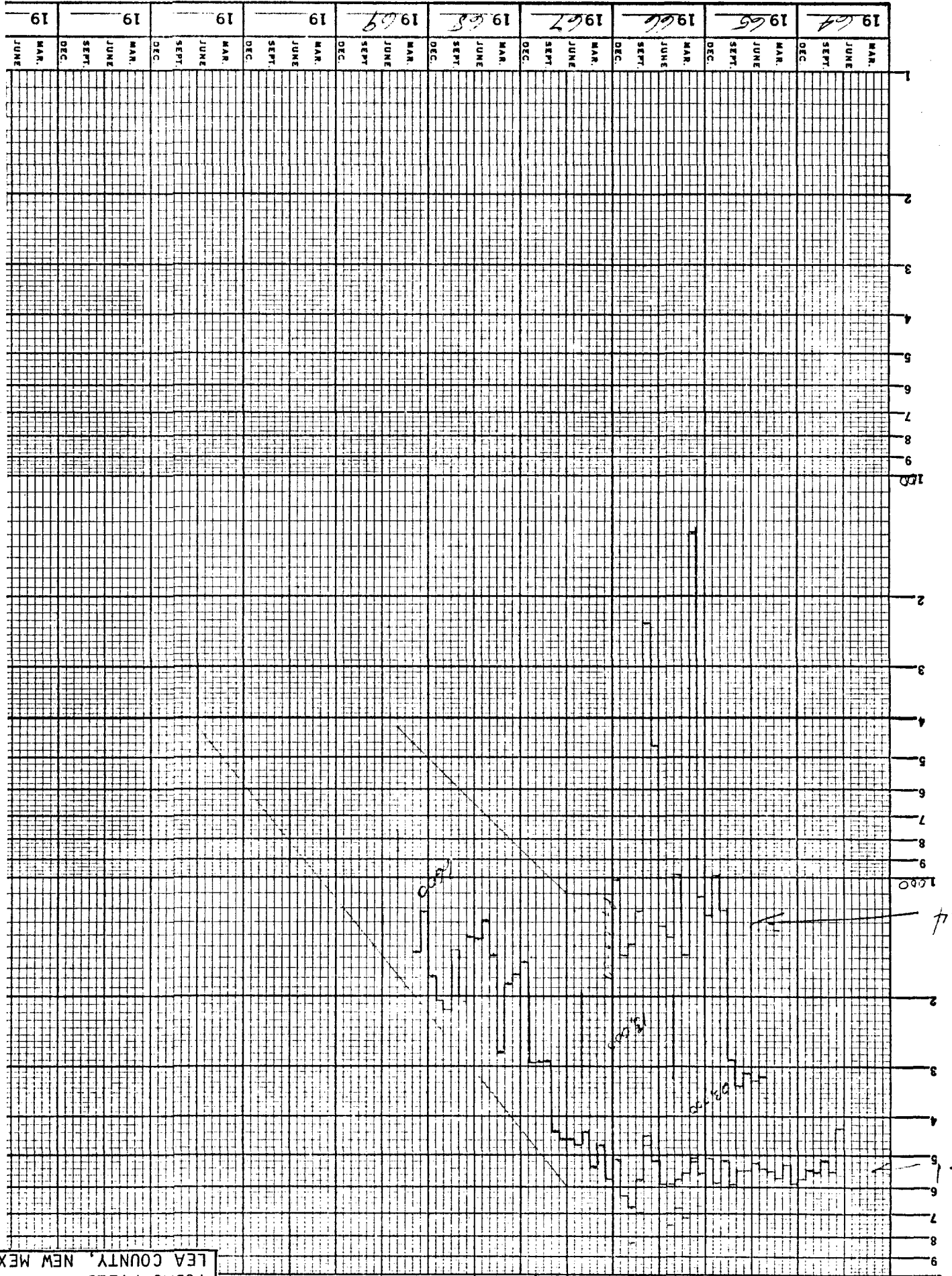
TOBAC FIELD
CUMULATIVE PRODUCTION FIGURES
CHAVES COUNTY, NEW MEXICO

<u>WELL NAME</u>	<u>LOCATION</u>	<u>CUMULATIVE PRODUCTION MARCH 1, 1969</u>
Well #1 E	Section 28 T8S-R33E	202,179
Well #1 O	Section 17 T8S-R33E	168,723
Well #2 K	Section 17 T8S-R33E	204,417
Well #3 N	Section 17 T8S-R33E	239,936
Well #4 P	Section 17 T8S-R33E	179,602
Well #1 K	Section 29 T8S-R33E	3,083
Well #1 O	Section 20 T8S-R33E	318,395
Well #1 D	Section 32 T8S-R33E	10,007
Well #1 L	Section 28 T8S-R33E	153,377
Well #1 A	Section 29 T8S-R33E	234,002
Well #2 F	Section 29 T8S-R33E	212,085
Well #3 J	Section 29 T8S-R33E	197,554
Well #1 H	Section 31 T8S-R33E	18,212
Well #1 K	Section 20 T8S-R33E	235,851
Well #2 E	Section 20 T8S-R33E	184,620
Well #3 C	Section 20 T8S-R33E	218,106
Well #6 J	Section 21 T8S-R33E	81,822
Well #1 M	Section 16 T8S-R33E	171,754
Well #2 K	Section 16 T8S-R33E	39,635
Well #1 D	Section 21 T8S-R33E	204,415
Well #1 L	Section 20 T8S-R33E	214,078
Well #1 A	Section 25 T8S-R32E	140,577
Well #2 G	Section 25 T8S-R32E	56,710
Well #1 D	Section 28 T8S-R33E	276,938
Well #1 P	Section 24 T8S-R32E	47,809
Well #2 H	Section 24 T8S-R32E	2,357
Well #3 N	Section 24 T8S-R32E	6,441
Well #1 I	Section 20 T8S-R33E	239,796
Well #2 G	Section 20 T8S-R33E	261,436
Well #3 A	Section 20 T8S-R33E	222,436
Well #1 C	Section 29 T8S-R33E	254,025
Well #2 H	Section 29 T8S-R33E	212,277
Well #1 H	Section 30 T8S-R33E	237,730
Well #4 E	Section 30 T8S-R33E	32,104
Well #1 M	Section 21 T8S-R33E	190,609
Well #2 E	Section 21 T8S-R33E	209,785
Well #1 K	Section 21 T8S-R33E	118,708
Well #1 F	Section 18 T8S-R33E	20,400
Well #2 K	Section 18 T8S-R33E	12,406

Total

6,034,397

ave =
218,000
bbls/well



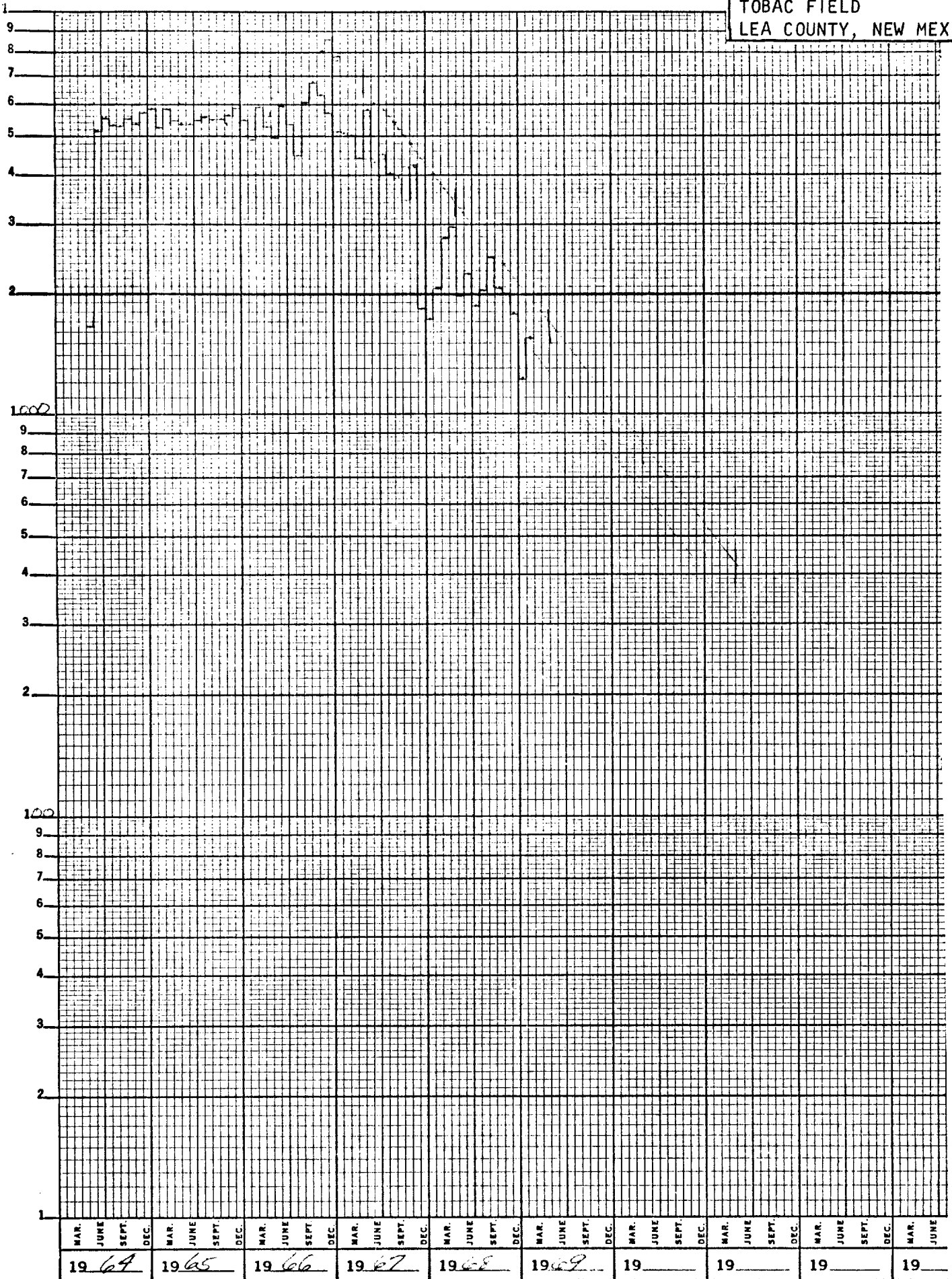
Bottom

30-4

30-1

SIGNAL OIL COMPANY
STATE 30-1 AND 30-4
TOBAC FIELD
LEA COUNTY, NEW MEXICO

SIGNAL OIL COMPANY
STATE 29 - WELL NO. 1
TOBAC FIELD
LEA COUNTY, NEW MEXICO



04/5/98

SCHUMBERGER

BOREHOLE COMPENSATED
SONIC LOG GAMMA RAY

COUNTY	FIELD or LOCATION	WELL	COMPANY
			ROGER C HANKS
		WELL	SILVER STATE #1
		FIELD	BAR 11
	COUNTY	LEN	STATE NEW MEXICO
	LOCATION	660 FNU + WL	
Sec. 12	Twp. 9 S	Rge. 32 E	Other Services: L MLL

Permanent Datum: G.L., Elev. 4418
Log Measured From K.B., 10' Ft. Above Perm. Datum
Drilling Measured From K.B.

Date	4/3/69	
Run No.	ONE	
Depth—Driller	9180	
Depth—Logger	9182	
3m. Log Interval	9180	
Top Log Interval	SURFACE	
Casing—Driller	85 1/2 @ 3646	
Casing—Logger	3645	
Bit Size	7 7/8	
Type Fluid in Hole	SALT GEL	
Dens.	Visc.	9.5
pl Fluid Loss	1	
Source of Sample		
Rm @ Meas. Temp.	10	
Rat @ Meas. Temp.	10	
Rmc @ Meas. Temp.	10	
Source: Rm	Rmc	
Ra @ BHT	10	
Time Since Circ.		
Box Rec. Temp.	13.1	

CASE NO. 4121

EXHIBIT NO. 2

