EXXON COMPANY, U.S.A.
POST OFFICE BOX 1600 • MIDLAND, TEXAS 79702-1600

PRODUCTION DEPARTMENT
SOUTHWEST/ROCKY MOUNTAIN DIVISION

THOMAS J TIBBITTS
REGULATORY AFFAIRS MANAGER

April 22, 1986

Downhole Commingling Request
N.M. "V" State #7
Lea County, New Mexico

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

ATTENTION: Mr. David Catanach

Gentlemen:

Exxon Corporation respectfully requests NMOCD approval to downhole commingle the Blinebry, Drinkard, and Tubb formations in the N.M. "V" State #7. If permission to downhole commingle is received, this well will be placed on sucker rod pump to effectively lift formation fluids from the wellbore resulting in increased flow rates, and increase ultimate recovery from these three oil zones.

None of the three zones of interest are active in the subject wellbore. The Tubb was perforated in April, 1956 and declined to 10 BOPD in April of 1963, when it was abandoned with a CIBP to recomplete in the Blinebry. The Blinebry quit flowing in 1974 and has since been inactive.

The Blinebry currently has 2600' of fluid on the formation. The Drinkard has not been completed in this wellbore, but a twin wellbore, the N.M. "V" State #2, tested 22 BO + 3 BW from the Drinkard in January, 1949. This well was plugged two months later as uneconomic. The N.M. "V" State #3, a direct offset to the #7 is currently completed in the Drinkard and has a shut-in fluid level 2700' above the formation. This shows pressure similar to that in the Blinebry. Downhole commingling will enable Exxon to place the well on sucker rod pump to remove the formation fluids at an economical rate.

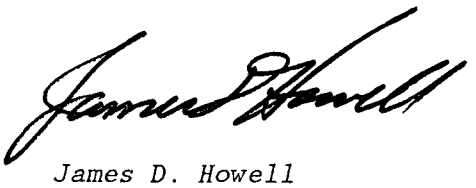
The Tubb and Drinkard zones currently are not open in this wellbore. Our data indicates that there are producible oil and gas reserves in these formations. However, we cannot economically justify doing the individual workovers due to the extent of depletion in the reservoirs. Downhole commingling is being requested to prevent this waste. Economics are favorable to produce the Blinebry, Drinkard, and Tubb simultaneously.

The Blinebry, Drinkard, and Tubb zones currently satisfy the requirements necessary to apply for downhole commingling (see Attachment 1). The items Exxon

must submit to the Division to obtain approval are listed on Attachment 2, and subsequent attachments contain the data required by Attachment 2.

Please contact J. W. Jordan (915) 523-3650 if any further information is required.

Yours truly,



James D. Howell

JDH:dsf

Attachments

c: Offset Operators (Certified Mail)
District I - NMOCD, Hobbs, NM

ATTACHMENT 1

N.M. "V" State #7 - Downhole Commingling - Requirements

This well satisfies the requirements necessary for downhole commingling as follows:

1. *The total combined daily oil production from the oil zones before commingling does not exceed 40 BOPD.*

2. *Oil zones require artificial lift, or both zones are capable of flowing. All zones now require artificial lift, which will be installed when the three zones are commingled.*

3. *Neither zone produces more than 40 BWPD.*

4. *The fluids from each zone are compatible with the fluids from the other, and combining the fluids will not result in the formation of precipitates which damage either reservoir. See attached data.*

5. *The total value of the crude will not be reduced by commingling. See attached data.*

6. *Ownership of the zones to be commingled is common (including working interest, royalty, and overriding royalty).*

7. *The commingling will not jeopardize the efficiency of present or future secondary recovery operations in either of the zones to be commingled.*

8. *The commingling is necessary to permit a zone or zones to be produced which would not otherwise be economically producible.*

9. *There will be no crossflow between zones to be commingled.*

10. *The bottomhole pressure of the lower pressure zone is not less than 50 percent of the bottomhole pressure of the higher pressure zone adjusted to a common datum. See attached data.*

ATTACHMENT 2

N.M. "V" State #7 - Downhole Commingling - Data Required

To obtain approval for downhole commingling, we have enclosed the following data pursuant to Rule 303(C)(2)(a through j):

1. *Exxon's name and address:*

   Exxon Corporation
   1700 West Broadway
   Andrews, TX 79714

2. *Lease name, well number, well location, and name of pools to be commingled:*

   New Mexico "V" State No. 7, 500' FSL, 1880' FWL, Section 10, T-21-S, R-37-E, Lea County, New Mexico. Pools to be commingled: Blinebry, Drinkard and Tubb.

3. *A plat of the area showing the acreage dedicated to the well and the ownership of all offsetting leases: Attached.*

4. *A 24-hour productivity test on Division Form C-116 showing the amount of oil, gas, and water produced from each zone: Attached.*

5. *A production decline curve for both zones showing that for a period of at least one year, a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes: Attached.*

6. *A current bottomhole pressure for each zone capable of flowing:*

   Measured BHP - Blinebry 875 psig. Estimated BHP - Tubb 709 psig, based on measured BHP in the N.M. "V" State #11, a direct offset. Estimated BHP - Drinkard 898 psig, based on measured BHP in the N.M. "V" State #3, a direct offset. Common datum - mid perfs of Blinebry (5803').

   BHP Bomb data are attached.

7. *A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the wellbore:*

   See attached hydrocarbon analysis. The Tubb hydrocarbon analysis is from the N.M. "V" State #11, a direct offset, and the Drinkard hydrocarbon analysis is from the N.M. "V" State #6, a direct offset. Exxon has commingled these fluids at the surface and has encountered no incompatibility problems.

8. *A computation showing that the value of the commingled production will not be less than the sum of the values of the individual streams: Attached.*

9. *A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such a formula:*

Blinebry Pool:

$$\text{Oil Allocation} = \left[\frac{4e^{-(0.2310)t} + 8e^{-(0.2310)t}}{16e^{-(0.4621)t}} + 1\right]^{-1} = \underline{0.0620}$$

$$\text{Gas Allocation} = \left[\frac{45e^{-(0.0564)t} + 150e^{-(0.3054)t}}{190e^{-(0.4656)t}} + 1\right]^{-1} = \underline{0.0179}$$

Tubb Pool:

$$\text{Oil Allocation} = \left[\frac{16e^{-(0.4621)t} + 4e^{-(0.2310)t}}{8e^{-(0.2310)t}} + 1\right]^{-1} = \underline{0.6253}$$

$$\text{Gas Allocation} = \left[\frac{190e^{-(0.4656)t} + 45e^{-(0.0564)t}}{150e^{-(0.3054)t}} + 1\right]^{-1} = \underline{0.1137}$$

Where t = time between January 1, 1973 and January 1, 1986 = 13 years

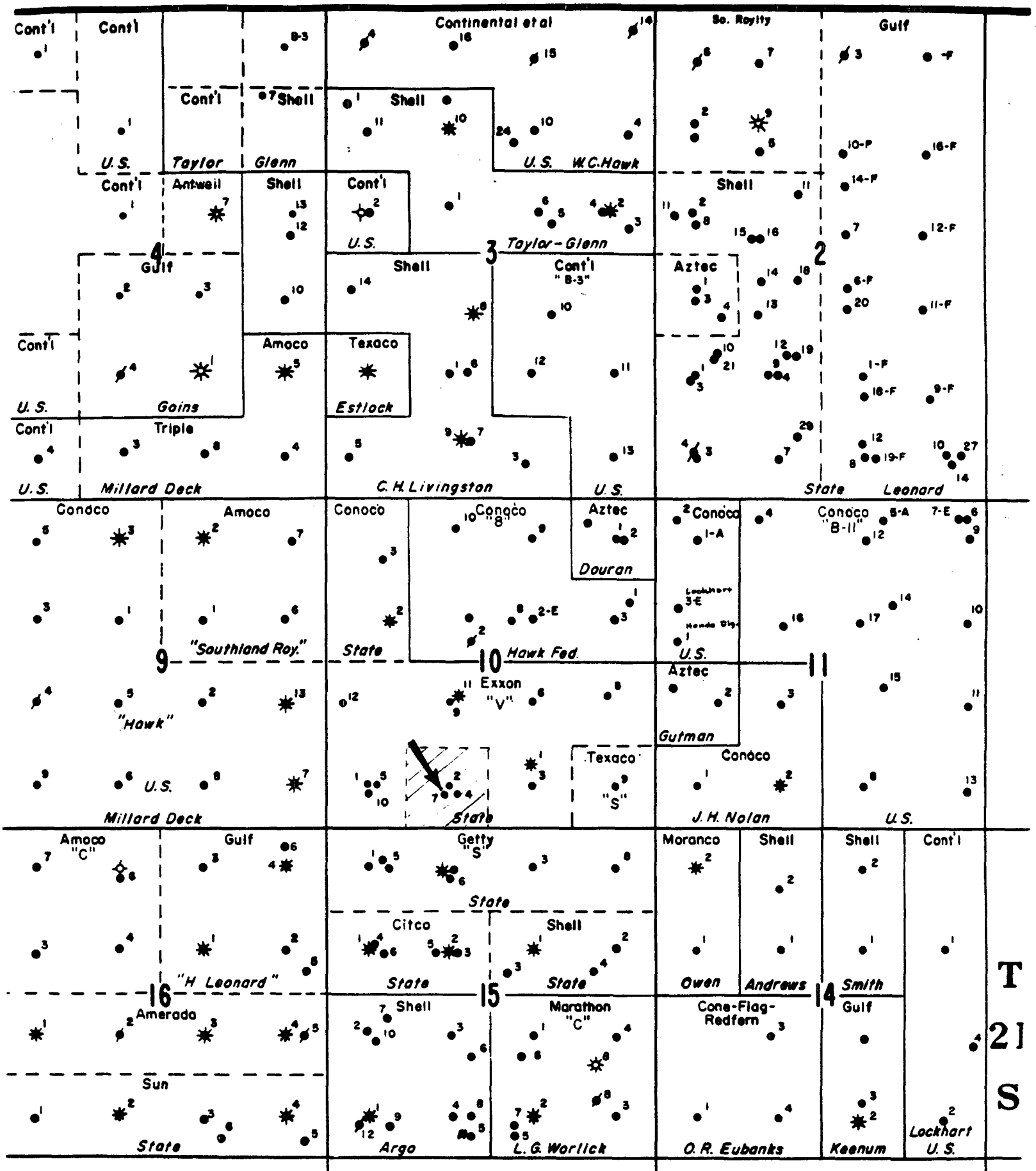
Drinkard Pool: *Oil Allocation = 1 - Blinebry Oil Allocation - Tubb*
Oil Allocation = 0.3127
Gas Allocation = 1 - Blinebry Gas Allocation - Tubb
Gas Allocation = 0.8684

Computations of the production allocations to each zone are attached.

10. *A statement that all offset operators and, in case of a well on Federal land, the United States Geological Survey, has been notified in writing of the proposed commingling:*

All offset operators (list attached) have been notified by copy of this application.

R 37 E



T 21 S

ACREAGE DEDICATED TO THE N.M. "V" STATE #7

116-0057E

INDIVIDUAL WELL TEST REPORT

DO NOT WRITE IN SHADED AREAS – DIVISION OFFICE USE ONLY

DATE 8-31-85

LEASE: N.M. "V" STATE

TYPE TEST: G.O.R.

FIELD: Blinebry oil

METHOD OF PRODUCTION (CHECK ONE): ☐ PUMP ☑ FLOW ☐ GAS LIFT

WELL NO.: 7

CAL DAY ALLOW.:

SCHED. DAY ALLOW.:

ARTIFICAL LIFT (CHECK ONE): ☐ CENT. ☐ ROD ☐ PLUNGER ☐ HYD. ☐ KOBE ☐ OTHER

PRIME MOVER (CHECK ONE): ☐ GAS ENG. ☐ ELEC. ☐ OTHER

FORS TAG INFORMATION

PUMPING WELLS ONLY

KP ONLY 1 2 3	RCD TYPE 4 5	BATT. 6 7 8	SUB BATT. 9 10	ITEM —	ZONE 11 12	ITEM —	COMPLETION NUMBER: SEC CODE 13 14 / WELL NO. 15 16 17 18	ITEM +	DSC 19	ITEM + 00	TEST DATE: MO 20 21 / DAY 22 23 / YR 24 25	ITEM + 01	ELAPSED TEST TIME: HRS 26 27 / MIN 28 29	ITEM + 02	STATUS 30	METHOD 31	TYPE TEST 32 33	ITEM + 03	ALLOW TYPE 34 35	ITEM + 04	DAYS OFF PROD. 36 37 38	ITEM + 05	LENGTH OF STROKE 39 40 41 42 43	ITEM + 06	STROKES PER MINUTE 44 45 46 47	ITEM + 07	PUMP SIZE: INCHES 48 49 50 51	ITEM + 08	TIME PUMPED DURING TEST: HRS 52 53 / MIN 54 55	ITEM + 09
A 0 1	1 6										8 31 85	+ 01		+ 02				+ 03		+ 04	.	+ 05		+ 06	.	+ 07	.	+ 08		+ 09

OIL OR GAS WELL PRODUCTION

KP ONLY 1 2 3	TEST OIL OR CONDENSATE (BBLS) 26 27 28 29 30 31	ITEM + 10	TOTAL FLUID (BBLS) 32 33 34 35 36 37	ITEM + 11	TEST WATER (BBLS) 38 39 40 41 42 43	ITEM + 12	OIL OR COND. GRAV. 44 45 46	ITEM + 13	OIL OR COND. TEMP. 47 48 49 50	ITEM + 14	FLUID CHOKE SIZE 51 52 53 54	ITEM + 15	TUBING PRESSURE 55 56 57 58 59	ITEM + 16	BEGINNING CASING PRESSURE 60 61 62 63 64	ITEM + 17	ENDING CASING PRESSURE 65 66 67 68 69	ITEM + 18	TRAP PRESSURE 70 71 72 73 74	ITEM + 19	SHUT-IN WELLHEAD PRESSURE 75 76 77 78 79 80	ITEM + 20
A 0 2	.		.		.		.															

OUTPUT GAS OR GAS WELL DATA

ENTER EITHER ITEM 30 THRU ITEM 35 OR ITEM 36 & 37

KP ONLY 1 2 3	LINE SIZE 26 27 28 29	ITEM + 30	PLATE SIZE 30 31 32 33	ITEM + 31	SPRING SIZE 34 35 36 37	ITEM + 32	DIFF. RANGE 38 39 40 41	ITEM + 33	AVG. RED (DIFF) 42 43	ITEM + 34	AVG. BLUE (STAT) 44 45	ITEM + 35	OUTPUT GAS VOLUME (MCF) 46 47 48 49 50	ITEM + 36	GAS GRAV. 51 52 53	ITEM + 37	ART. LIFT 54	ITEM + 38	PRIME MOVER 55	ITEM + 39	HIS COM-MENTS 56 57	ITEM + 40
A 0 3	.		.						.		.				.							

This Zone Dead

INPUT GAS LIFT DATA

GAS LIFT CHOKE DATA

ENTER EITHER ITEM 54 THRU 59 OR ITEM 60

KP ONLY 1 2 3	INTER-MITTER TIME: HRS 26 27 / MIN 28 29	ITEM + 50	INTER-MITTER INTERVAL: HRS 30 31 / MIN 32 33	ITEM + 51	INPUT LINE PRESSURE 34 35 36 37 38	ITEM + 52	CHOKE SIZE 39 40 41 42	ITEM + 53	LINE SIZE 43 44 45 46	+ 54	PLATE SIZE 47 48 49 50	ITEM + 55	SPRING SIZE 51 52 53 54	ITEM + 56	DIFF. RANGE 55 56 57 58 59	ITEM + 57	AVG. RED (DIFF) 60 61	ITEM + 58	AVG. BLUE (STAT) 62 63	ITEM + 59	GAS LIFT VOLUME (MCF) 64 65 66 67 68	ITEM + 60	CONTROL TOTAL 69 70 71 72 73 74 75 76 77	+ OR –
A 0 4									.		.						.		.					

FOR DISTRICT USE ONLY

HIS COMMENTS

CODES – 1-20 (LOOK AT FOR IMMEDIATE ACTION)
1 - Well going to water
2 - Well going high GOR
3 - Well flows and dies
4 - Rapid decrease in production
5 - Need to raise allowable
6 - Suspected well response
7 - Suspected tubing or casing leak
8 - Pump not operating properly
9 - Production restricted by surface facilities.

CODES – 21-40 INFORMATION
21 - Well shut in; tested for information
22 - Flows by heads
23 - Flowing on intermitter
24 - Well pumps down
25 - High fluid level
26 - FRW test after workover
27 - Test after well work
28 - Test after hot oil treatment
29 - Suspected non-representative test

TYPE TEST

CODES –

OIL		GAS	
1 - Scheduled	GO-2	50 - Initial	G-2
2 - Special	GO-2	51 - Routine	G-2
3 - Routine	GO-2	52 - Special	G-2
4 - Potential or Repotential		53 - Routine	G-3
		54 - Special	G-3
5 - Allocation		55 - Routine	G-4
6 - Information		56 - Special	G-4
7 - Monthly	GO-2	57 - Information	

ALLOWABLE TYPE

CODES –
1 - Prorated
2 - Exempt
3 - Marginal
5 - Discovery

CHOKES

CODES –
7 - P
8 - X

METHOD OF PROD.

CODES –
1 - Flow
2 - Pump
3 - Gas Lift
4 - Gas Well-Wet
5 - Gas Well-Dry

ARTIFICIAL LIFT

CODES –
1 - Centrifical
2 - Rod Pump
3 - Plunger
4 - Hydraulic
5 - Kobe
6 - Other

PRIME MOVER

CODES –
1 - Gas Engine
2 - Electric Motor
3 - Other

SIGNATURE: E. L. Cellum

116-0057E

INDIVIDUAL WELL TEST REPORT

DO NOT WRITE IN SHADED AREAS – DIVISION OFFICE USE ONLY

DATE 8-31-85

LEASE: N.M. "V" STATE

TYPE TEST: G.O.R.

FIELD: Tubb oil

METHOD OF PRODUCTION (CHECK ONE): ☐ PUMP ☒ FLOW ☐ GAS LIFT

WELL NO.: 11

CAL DAY ALLOW.: 4

SCHED. DAY ALLOW.:

ARTIFICAL LIFT (CHECK ONE): ☐ CENT. ☐ ROD ☐ PLUNGER ☐ HYD. ☐ KOBE ☐ OTHER

PRIME MOVER (CHECK ONE): ☐ GAS ENG. ☐ ELEC. ☐ OTHER

FORS TAG INFORMATION

KP ONLY	RCD TYPE	BATT.	SUB BATT.	ITEM	ZONE	ITEM	COMPLETION NUMBER: SEC. CODE	COMPLETION NUMBER: WELL NO.	ITEM	DSC	ITEM	TEST DATE: MO	TEST DATE: DAY	TEST DATE: YR	ITEM	ELAPSED TEST TIME: HRS	ELAPSED TEST TIME: MIN	ITEM	STATUS	METHOD	TYPE TEST	ITEM	ALLOW TYPE	ITEM	DAYS OFF PROD.	ITEM
1 2 3	4 5	6 7 8	9 10		11 12		13 14	15 16 17 18		19	+ 00	20 21	22 23	24 25	+ 01	26 27	28 29	+ 02	30	31	32 33	+ 03	34 35	+ 04	36 37 38	+ 05
A 0 1	1 6			–		–			+			8	20	85		24	00									

PUMPING WELLS ONLY

LENGTH OF STROKE	ITEM	STROKES PER MINUTE	ITEM	PUMP SIZE: INCHES	ITEM	TIME PUMPED DURING TEST: HRS	TIME PUMPED DURING TEST: MIN	ITEM
39 40 41 42 43	+ 06	44 45 46 47	+ 07	48 49 50 51	+ 08	52 53	54 55	+ 09
		.		.				

OIL OR GAS WELL PRODUCTION

KP ONLY	TEST OIL OR CONDENSATE (BBLS)	ITEM	TOTAL FLUID (BBLS)	ITEM	TEST WATER (BBLS)	ITEM	OIL OR COND. GRAV.	ITEM	OIL OR COND. TEMP.	ITEM	FLUID CHOKE SIZE	ITEM	TUBING PRESSURE	ITEM	BEGINNING CASING PRESSURE	ITEM	ENDING CASING PRESSURE	ITEM	TRAP PRESSURE	ITEM	SHUT-IN WELLHEAD PRESSURE	ITEM
1 2 3	26 27 28 29 30 31		32 33 34 35 36 37		38 39 40 41 42 43		44 45 46		47 48 49 50		51 52 53 54		55 56 57 58 59		60 61 62 63 64		65 66 67 68 69		70 71 72 73 74		75 76 77 78 79 80	
A 0 2	4.	+ 10	4.	+ 11	0	+ 12	.	+ 13		+ 14		+ 15		+ 16		+ 17		+ 18		+ 19		+ 20

OUTPUT GAS OR GAS WELL DATA

ENTER EITHER ITEM 30 THRU ITEM 35 OR ITEM 36 & 37

KP ONLY	LINE SIZE	ITEM	PLATE SIZE	ITEM	SPRING SIZE	ITEM	DIFF. RANGE	ITEM	AVG. RED (DIFF)	ITEM	AVG. BLUE (STAT)	ITEM	OUTPUT GAS VOLUME (MCF)	ITEM	GAS GRAV.	ITEM	ART. LIFT	ITEM	PRIME MOVER	ITEM	HIS COMMENTS	ITEM
1 2 3	26 27 28 29		30 31 32 33		34 35 36 37		38 39 40 41		42 43		44 45		46 47 48 49 50		51 52 53		54		55		56 57	
A 0 3	4.000	+ 30	.750	+ 31	100	+ 32	100	+ 33	26	+ 34	60	+ 35	32	+ 36	.	+ 37		+ 38		+ 39		+ 40

GAS LIFT CHOKE DATA 1.7 5.8

INPUT GAS LIFT DATA

ENTER EITHER ITEM 54 THRU 59 OR ITEM 60

KP ONLY	INTER-MITTER TIME: HRS	INTER-MITTER TIME: MIN	ITEM	INTER-MITTER INTERVAL: HRS	INTER-MITTER INTERVAL: MIN	ITEM	INPUT LINE PRESSURE	ITEM	CHOKE SIZE	ITEM	LINE SIZE	ITEM	PLATE SIZE	ITEM	SPRING SIZE	ITEM	DIFF. RANGE	ITEM	AVG. RED (DIFF)	ITEM	AVG. BLUE (STAT)	ITEM	GAS LIFT VOLUME (MCF)	ITEM	CONTROL TOTAL	+ OR –
1 2 3	26 27 28 29			30 31 32 33			34 35 36 37 38		39 40 41 42		43 44 45 46		47 48 49 50		51 52 53 54		55 56 57 58 59		60 61		62 63		64 65 66 67 68		69 70 71 72 73 74 75 76 77	
A 0 4		+ 50				+ 51		+ 52		+ 53	.	+ 54	.	+ 55		+ 56		+ 57	.	+ 58	.	+ 59		+ 60		

FOR DISTRICT USE ONLY

7,953 DOK.

HIS COMMENTS

CODES – 1-20 (LOOK AT FOR IMMEDIATE ACTION)
1 - Well going to water
2 - Well going high GOR
3 - Well flows and dies
4 - Rapid decrease in production
5 - Need to raise allowable
6 - Suspected well response
7 - Suspected tubing or casing leak
8 - Pump not operating properly
9 - Production restricted by surface facilities.

CODES – 21-40 INFORMATION
21 - Well shut in; tested for information
22 - Flows by heads
23 - Flowing on intermitter
24 - Well pumps down
25 - High fluid level
26 - FRW test after workover
27 - Test after well work
28 - Test after hot oil treatment
29 - Suspected non-representative test

TYPE TEST

CODES –

OIL	GAS
1 - Scheduled GO-2	50 - Initial G-2
2 - Special GO-2	51 - Routine G-2
3 - Routine GO-2	52 - Special G-2
4 - Potential or Repotential	53 - Routine G-3
	54 - Special G-3
5 - Allocation	55 - Routine G-4
6 - Information	56 - Special G-4
7 - Monthly GO-2	57 - Information

ALLOWABLE TYPE

CODES –
1 - Prorated
2 - Exempt
3 - Marginal
5 - Discovery

CHOKES

CODES –
7 - P
8 - X

METHOD OF PROD.

CODES –
1 - Flow
2 - Pump
3 - Gas Lift
4 - Gas Well-Wet
5 - Gas Well-Dry

ARTIFICIAL LIFT

CODES –
1 - Centrifical
2 - Rod Pump
3 - Plunger
4 - Hydraulic
5 - Kobe
6 - Other

PRIME MOVER

CODES –
1 - Gas Engine
2 - Electric Motor
3 - Other

SIGNATURE Ed Calla

115.08 X 1.2403 X 0.9777 =

134.438 X 1.7 X 5.8 X 0.24 =

21813 ÷ 7953 DOK

116-0057E

INDIVIDUAL WELL TEST REPORT

DO NOT WRITE IN SHADED AREAS – DIVISION OFFICE USE ONLY

DATE 8-31-85

LEASE: N.M. "V" STATE

TYPE TEST: G.O.R.

FIELD: Drinkard

METHOD OF PRODUCTION (CHECK ONE): ☐ PUMP ☑ FLOW ☐ GAS LIFT

WELL NO.: 3

CAL DAY ALLOW.:

SCHED. DAY ALLOW.:

ARTIFICAL LIFT (CHECK ONE): ☐ CENT. ☐ ROD ☐ PLUNGER ☐ HYD. ☐ KOBE ☐ OTHER

PRIME MOVER (CHECK ONE): ☐ GAS ENG. ☐ ELEC. ☐ OTHER

FORS TAG INFORMATION

KP ONLY	RCD TYPE	BATT.	SUB BATT.	ITEM	ZONE	ITEM	COMPLETION NUMBER: SEQ. CODE	COMPLETION NUMBER: WELL NO.	ITEM	DSC	ITEM	TEST DATE: MO	TEST DATE: DAY	TEST DATE: YR	ITEM	ELAPSED TEST TIME: HRS	ELAPSED TEST TIME: MIN	ITEM	STATUS	METHOD	TYPE TEST	ITEM	ALLOW TYPE	ITEM	DAYS OFF PROD.	ITEM
1 2 3	4 5	6 7 8	9 10		11 12		13 14	15 16 17 18		19		20 21	22 23	24 25		26 27	28 29		30	31	32 33		34 35		36 37 38	
A 0 1	1 6			–		–			+		+ 00	8	31	85	01			+ 02				+ 03		+ 04	.	+ 05

PUMPING WELLS ONLY

LENGTH OF STROKE	ITEM	STROKES PER MINUTE	ITEM	PUMP SIZE: INCHES	ITEM	TIME PUMPED DURING TEST: HRS	TIME PUMPED DURING TEST: MIN	ITEM
39 40 41 42 43	+ 06	44 45 46 47	+ 07	48 49 50 51	+ 08	52 53 54 55		+ 09
		.		.				

OIL OR GAS WELL PRODUCTION

KP ONLY	TEST OIL OR CONDENSATE (BBLS)	ITEM	TOTAL FLUID (BBLS)	ITEM	TEST WATER (BBLS)	ITEM	OIL OR COND. GRAV.	ITEM	OIL OR COND. TEMP.	ITEM	FLUID CHOKE SIZE	ITEM	TUBING PRESSURE	ITEM	BEGINNING CASING PRESSURE	ITEM	ENDING CASING PRESSURE	ITEM	TRAP PRESSURE	ITEM	SHUT-IN WELLHEAD PRESSURE	ITEM
1 2 3	26 27 28 29 30 31		32 33 34 35 36 37		38 39 40 41 42 43		44 45 46		47 48 49 50		51 52 53 54		55 56 57 58 59		60 61 62 63 64		65 66 67 68 69		70 71 72 73 74		75 76 77 78 79 80	
A 0 2	.	+ 10	.	+ 11	.	+ 12	.	+ 13		+ 14		+ 15		+ 16		+ 17		+ 18		+ 19		+ 20

OUTPUT GAS OR GAS WELL DATA

ENTER EITHER ITEM 30 THRU ITEM 35 OR ITEM 36 & 37

KP ONLY	LINE SIZE	ITEM	PLATE SIZE	ITEM	SPRING SIZE	ITEM	DIFF. RANGE	ITEM	AVG. RED (DIFF)	ITEM	AVG. BLUE (STAT)	ITEM	OUTPUT GAS VOLUME (MCF)	ITEM	GAS GRAV.	ITEM	ART. LIFT	ITEM	PRIME MOVER	HIS COM-MENTS	ITEM
1 2 3	26 27 28 29		30 31 32 33		34 35 36 37		38 39 40 41		42 43		44 45		46 47 48 49 50		51 52 53		54		55	56 57	
A 0 3	.	+ 30	.	+ 31		+ 32		+ 33	.	+ 34	.	+ 35		+ 36	.	+ 37		+ 38		+ 39		+ 40

GAS TOO weak TO Measure

INPUT GAS LIFT DATA

GAS LIFT CHOKE DATA

ENTER EITHER ITEM 54 THRU 59 OR ITEM 60

KP ONLY	INTER-MITTER TIME: HRS	INTER-MITTER TIME: MIN	ITEM	INTER-MITTER INTERVAL: HRS	INTER-MITTER INTERVAL: MIN	ITEM	INPUT LINE PRESSURE	ITEM	CHOKE SIZE	ITEM	LINE SIZE	ITEM	PLATE SIZE	ITEM	SPRING SIZE	ITEM	DIFF. RANGE	ITEM	AVG. RED (DIFF)	ITEM	AVG. BLUE (STAT)	ITEM	GAS LIFT VOLUME (MCF)	ITEM	CONTROL TOTAL	+ OR –
1 2 3	26 27 28 29			30 31 32 33			34 35 36 37 38		39 40 41 42		43 44 45 46		47 48 49 50		51 52 53 54		55 56 57 58 59		60 61		62 63		64 65 66 67 68		69 70 71 72 73 74 75 76 77	
A 0 4			+ 50			+ 51		+ 52		+ 53	.	+ 54	.	+ 55		+ 56		+ 57	.	+ 58	.	+ 59		+ 60		

FOR DISTRICT USE ONLY

HIS COMMENTS

CODES – 1-20 (LOOK AT FOR IMMEDIATE ACTION)

1 - Well going to water
2 - Well going high GOR
3 - Well flows and dies
4 - Rapid decrease in production
5 - Need to raise allowable
6 - Suspected well response
7 - Suspected tubing or casing leak
8 - Pump not operating properly
9 - Production restricted by surface facilities.

CODES – 21-40 INFORMATION

21 - Well shut in; tested for information
22 - Flows by heads
23 - Flowing on intermitter
24 - Well pumps down
25 - High fluid level
26 - FRW test after workover
27 - Test after well work
28 - *Test after hot oil treatment*
29 - Suspected non-representative test

TYPE TEST

CODES –

OIL		GAS	
1 - Scheduled	GO-2	50 - Initial	G-2
2 - Special	GO-2	51 - Routine	G-2
3 - Routine	GO-2	52 - Special	G-2
4 - Potential or Repotential		53 - Routine	G-3
5 - Allocation		54 - Special	G-3
6 - Information		55 - Routine	G-4
7 - Monthly	GO-2	56 - Special	G-4
		57 - Information	

ALLOWABLE TYPE

CODES –

1 - Prorated
2 - Exempt
3 - Marginal
5 - Discovery

CHOKES

CODES –

7 - P
8 - X

METHOD OF PROD

CODES –

1 - Flow
2 - Pump
3 - Gas Lift
4 - Gas Well-Wet
5 - Gas Well-Dry

ARTIFICIAL LIFT

CODES –

1 - Centrifical
2 - Rod Pump
3 - Plunger
4 - Hydraulic
5 - Kobe
6 - Other

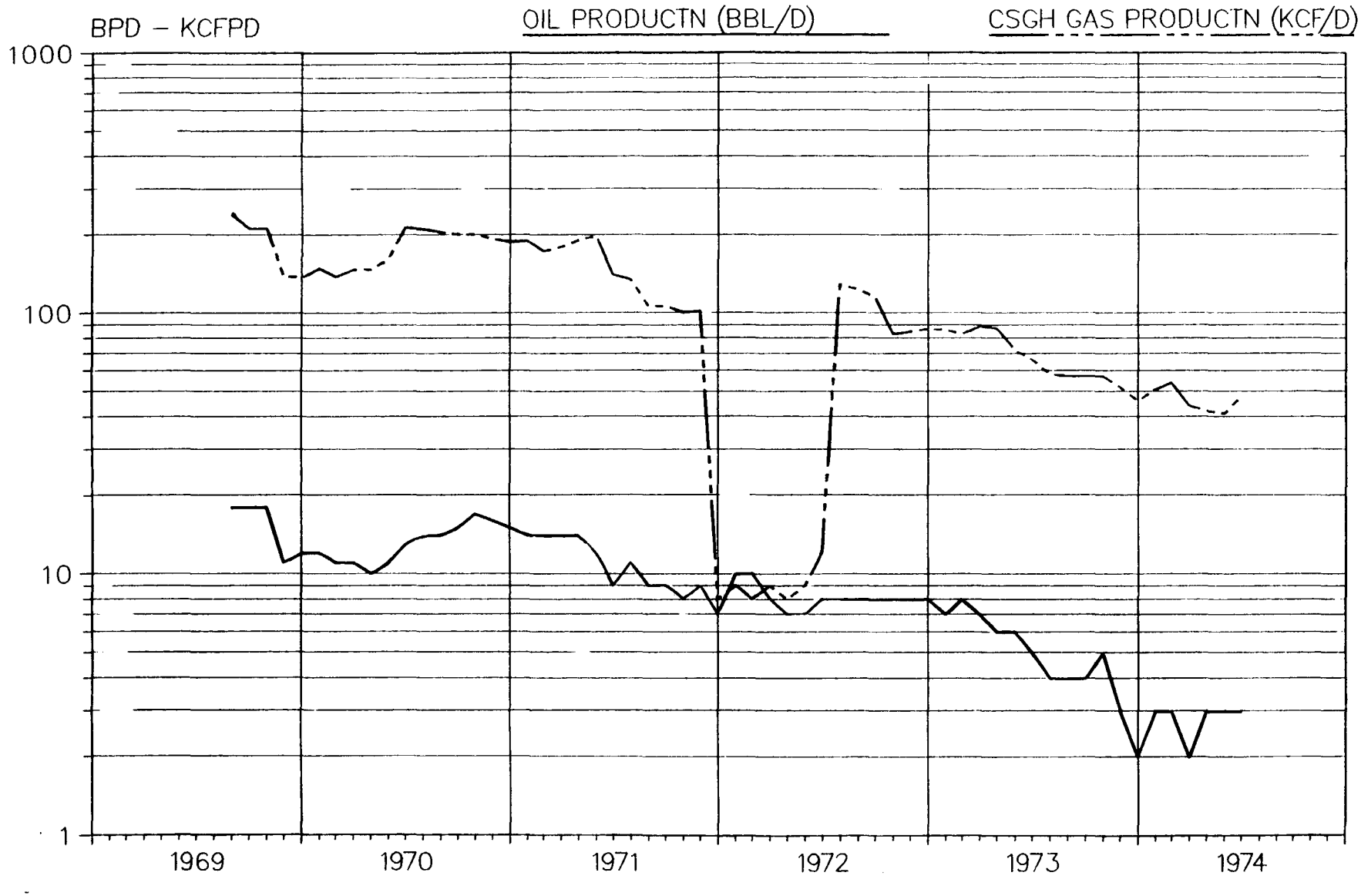
PRIME MOVER

CODES –

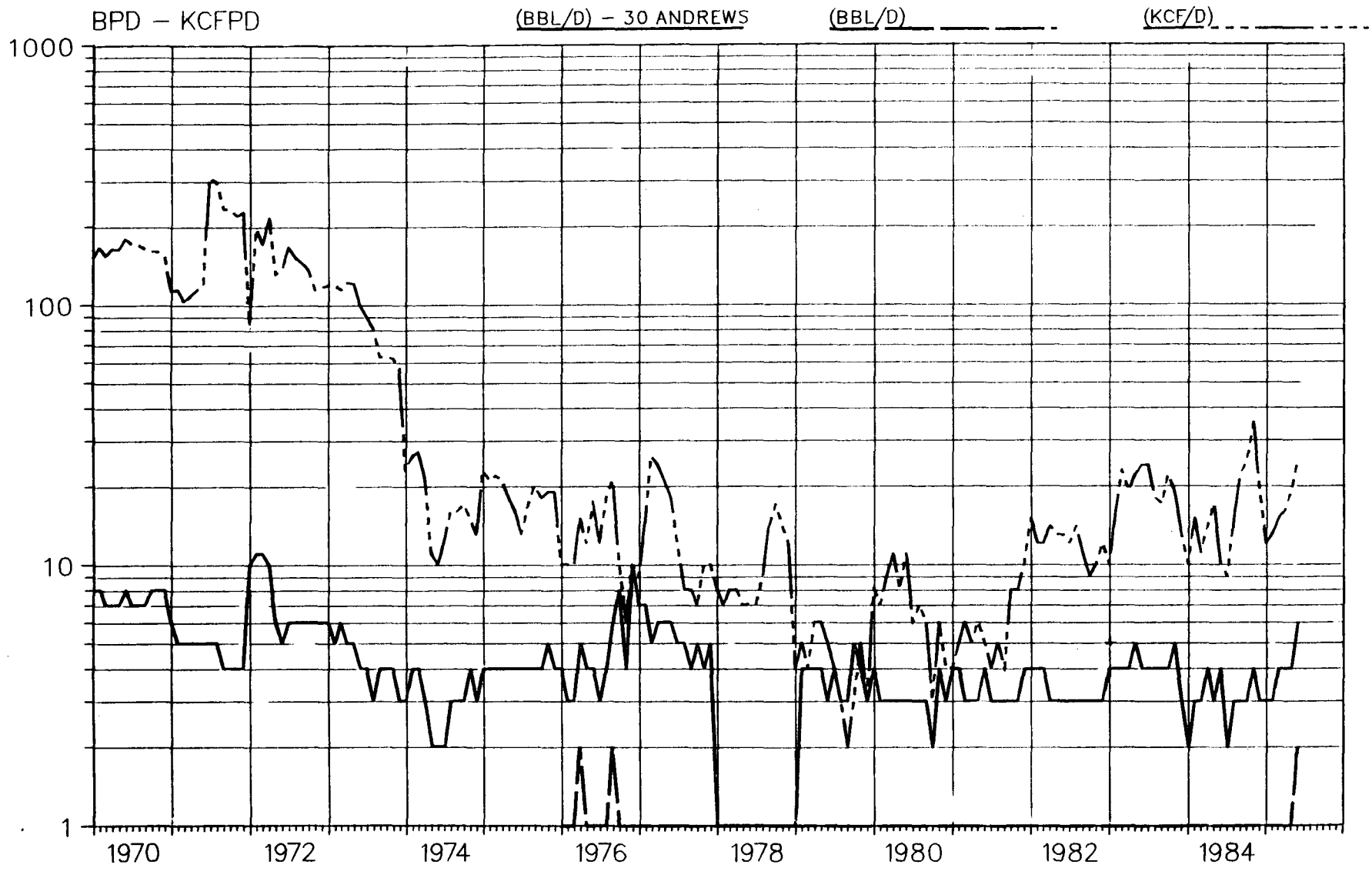
1 - Gas Engine
2 - Electric Motor
3 - Other

SIGNATURE: Ed Callins

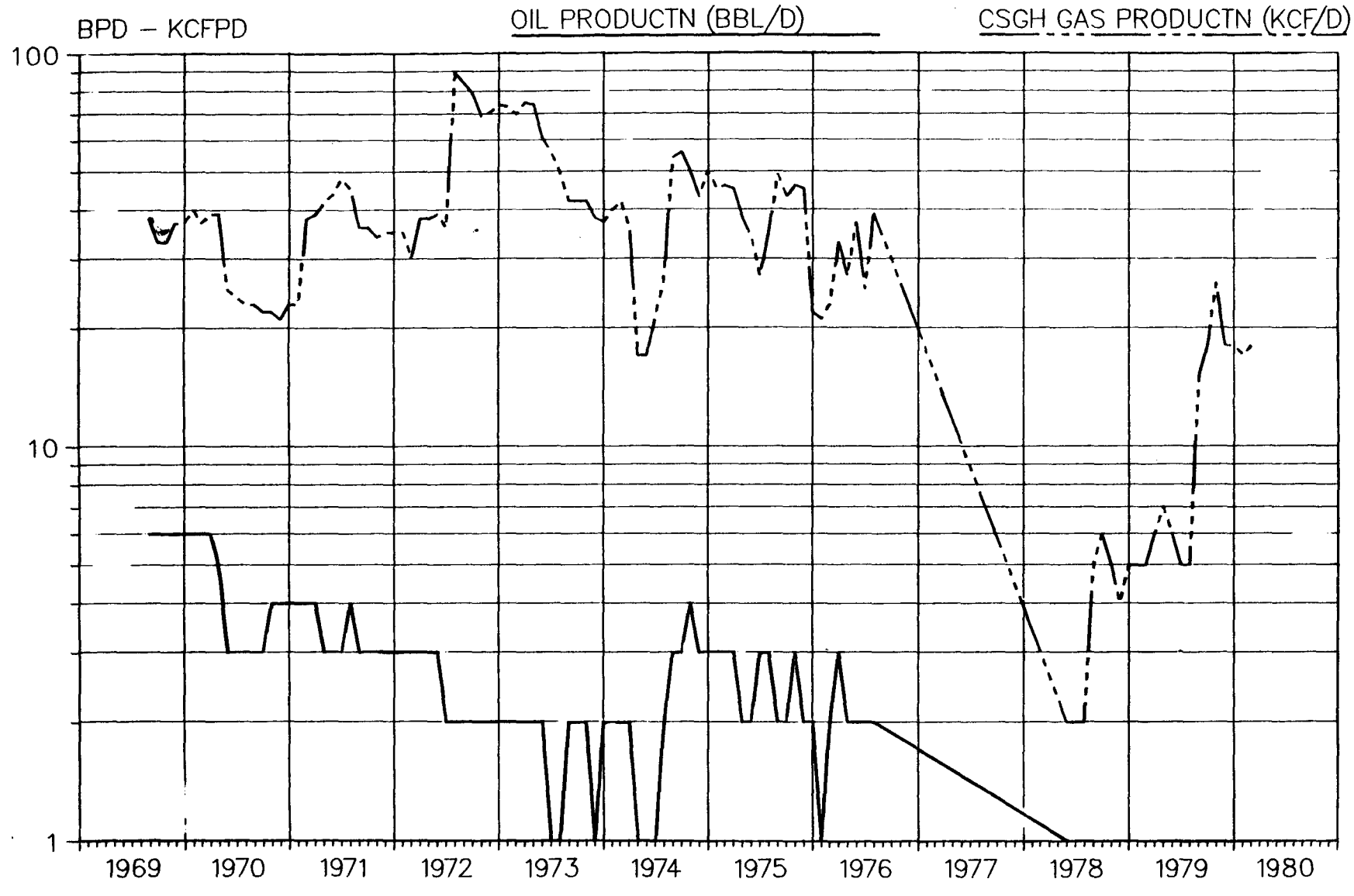
DISTRICT – 30 ANDREWS
FIELD – 3306 PADDOCK
RESERVOIR – 406 BLINEBRY
WELL– 0007 LSE–61992 NEW MEXICO V STATE



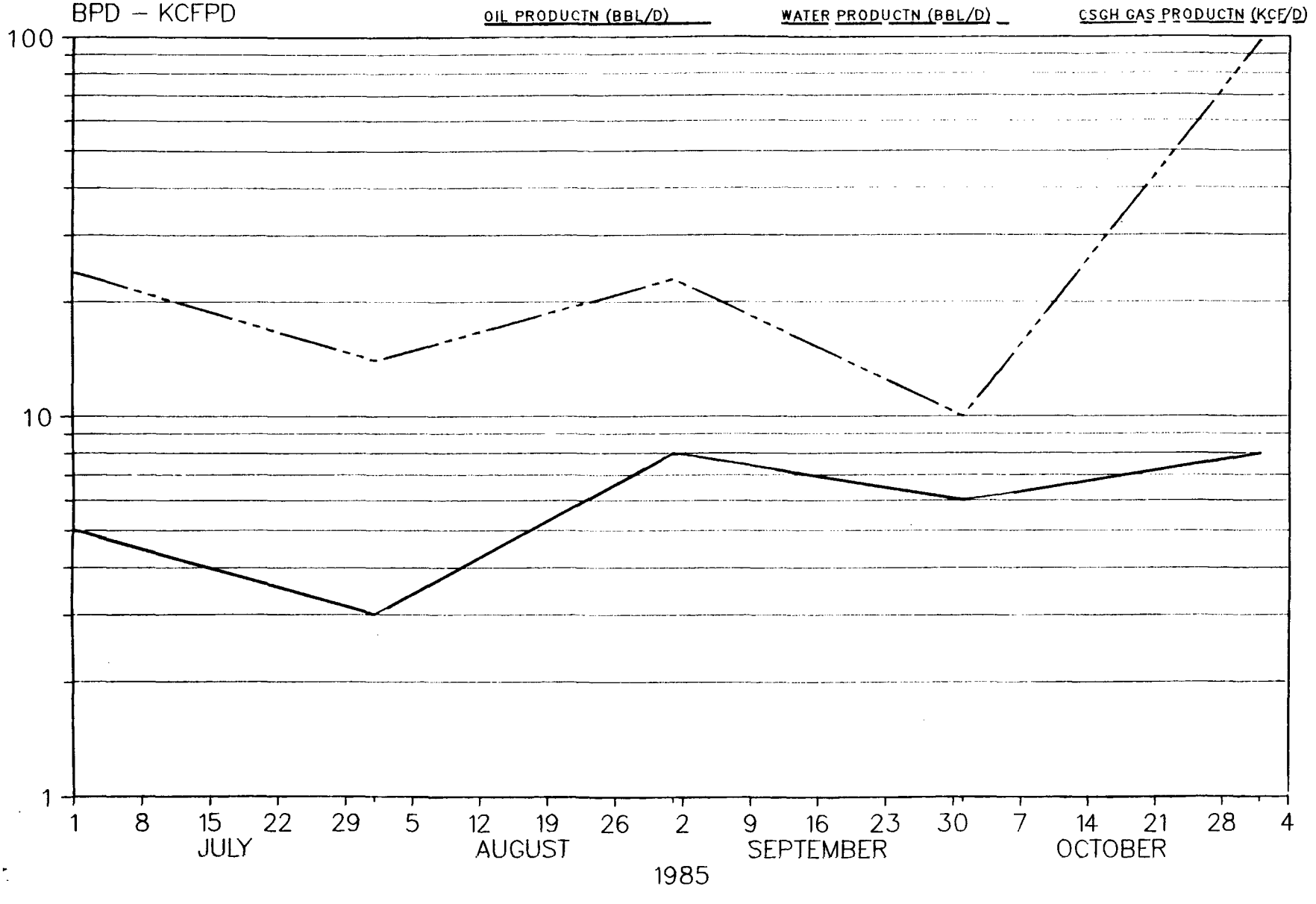
DISTRICT – 30 ANDREWS
FIELD – 3306 PADDOCK
RESERVOIR – 451 TUBB OIL
WELL– 0011 LSE–61992 NEW MEXICO V STATE



DISTRICT – 30 ANDREWS
FIELD – 3306 PADDOCK
RESERVOIR – 470 DRINKARD
WELL– 0003 LSE–61992 NEW MEXICO V STATE



DISTRICT – 30 ANDREWS
FIELD – 3306 PADDOCK
RESERVOIR – 451 TUBB OIL
WELL– 0011L LSE–61992 NEW MEXICO V STATE



JARREL SERVICES, INC.

POST OFFICE BOX 1654 PHONES 505 393-5396 — 393-8274

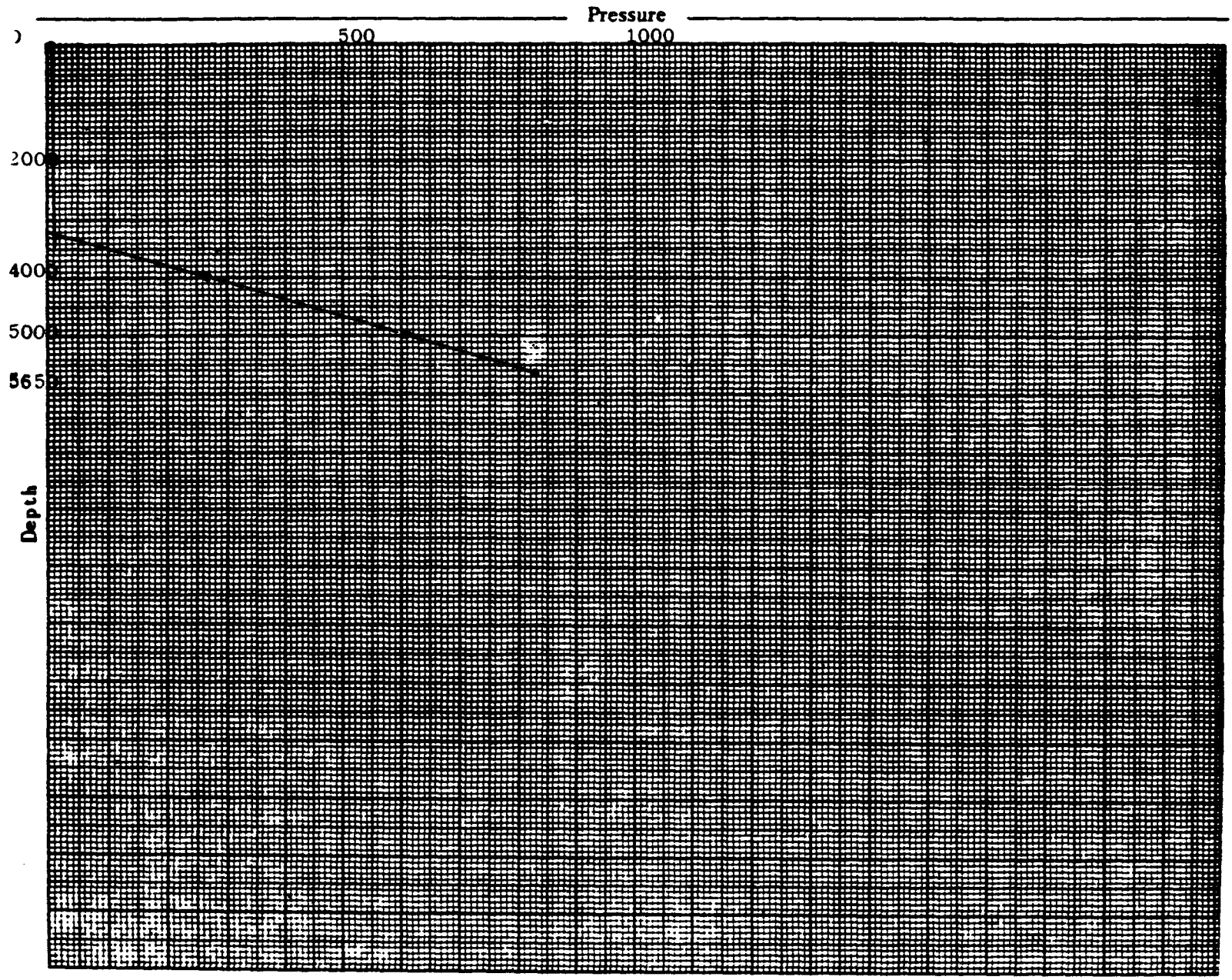
HOBBS, NEW MEXICO 88240

OPERATOR Exxon Company USA
FIELD B-D-T
FORMATION Blinebry
LEASE New Mexico V State WELL No. 7
COUNTY Lea STATE New Mexico
DATE 8/13/85 TIME 4:00 PM
Status Shut in
Test Depth 5650'
Time S. I. 7 days Last test date -
Tub Pres. 7 BHP last test -
Cas. Pres. PKR BHP change -
Elev. 3469 'RDB Fluid top 3245'
Datum (-2334)** Water top None
Temp. @ - Run by JSI #13
Cal. No. 42254 Chart No. 4

BOTTOM HOLE PRESSURE RECORD

Depth		Pressure	Gradient
0		7	-
2000		9	.001
4000		267	.129
5000		607	.340
5650		824	.334
5803	(-2334)	875 * **	(.334)

* EXTRAPOLATED PRESSURE
** MIDPOINT OF CASING PERFORATIONS



JARREL SERVICES, INC.

POST OFFICE BOX 1664 PHONES 505 393-5398 — 393-8274

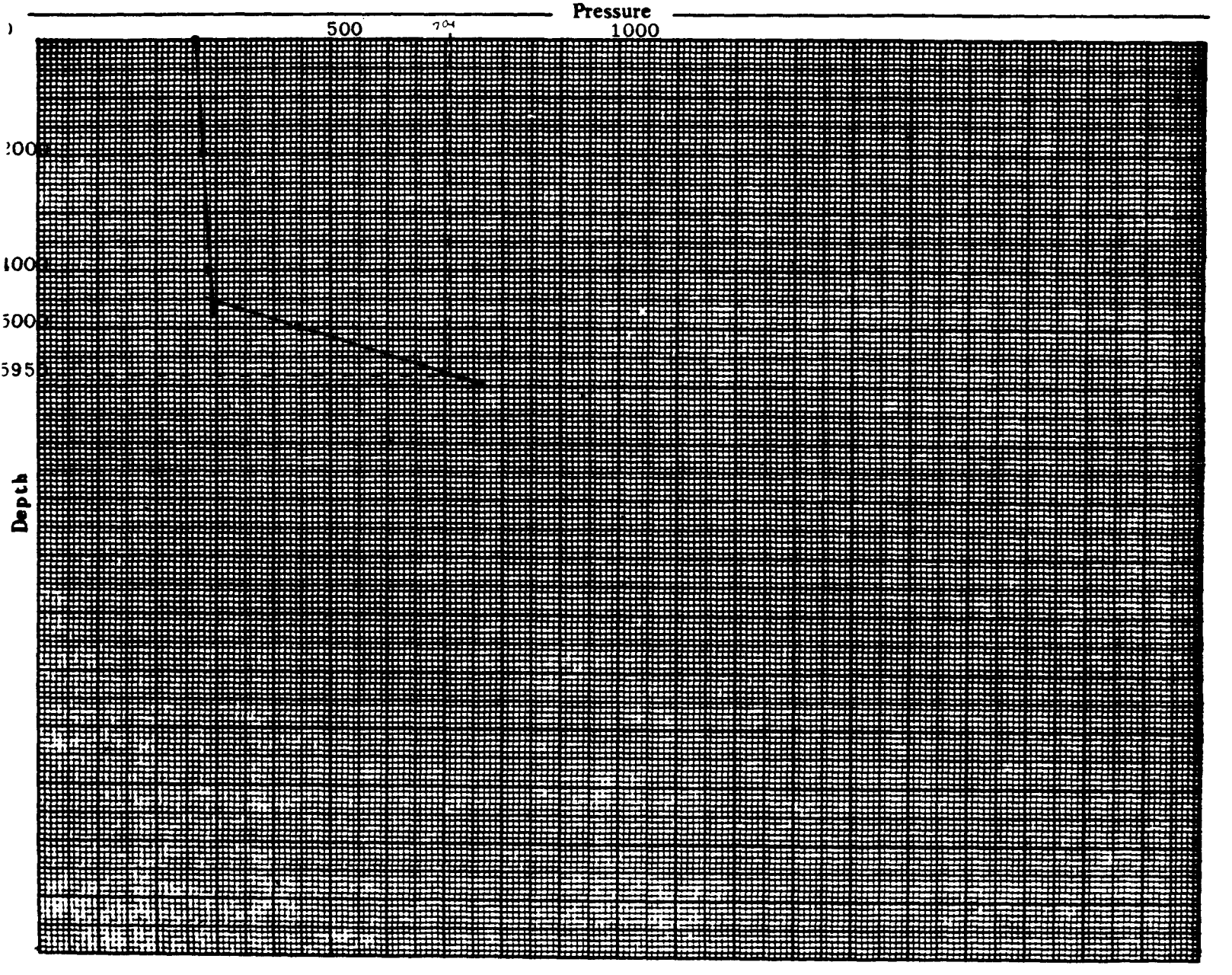
HOBBS, NEW MEXICO 88240

OPERATOR Exxon Company USA
FIELD B-D-T
FORMATION Tubb
LEASE New Mexico V State WELL No. 11
COUNTY Lea STATE New Mexico
DATE 8/12/85 TIME 2:00 PM
Status Shut in
Test Depth 5950'
Time S. I. 7 days Last test date -
Tub Pres. 266 BHP last test -
Cas. Pres. Dual BHP change -
Elev. 3452'GL Fluid top 4545'
Datum (-2747)** Water top None
Temp. @ - Run by JSI #13
Cal. No. 20275 Chart No. 2

BOTTOM HOLE PRESSURE RECORD

Depth		Pressure	Gradient
0		266	-
2000		277	.006
4000		288	.006
5000		443	.155
5950		760	.334
6199	(-2747)	843 * **	(.334)

* EXTRAPOLATED PRESSURE
** MIDPOINT OF CASING PERFORATIONS



NEW-TEX LAB

PHONE 505/393-3561 • P. O. BOX 1161 • 611 W. SNYDER • HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT:	EXXON COMPANY USA	ANALYSIS NUMBER:	7810
ADDRESS:	1700 W BROADWAY	DATE OF RUN:	8 12 85
CITY, STATE:	ANDREWS, TX 79714	DATE SECURED:	8 12 85

SAMPLE IDENT: "V" STATE #7 - BLINEBRY ZONE
SAMPLING PRESS:20 PSIG SAMPLING TEMP:93 DEG F

REMARKS: WELL SHUT IN INDEFINITE TIME;

REMARKS: H2S - NONE DETECTED

********* GAS ANALYSIS *********

	MOLE PERCENT	GAL/ MCF
NITROGEN	0.979	
CARBON DIOXIDE	0.000	
METHANE	84.547	
ETHANE	8.174	2.180
PROPANE	3.417	0.938
ISO-BUTANE	0.381	0.124
NORMAL BUTANE	0.972	0.306
ISO-PENTANE	0.286	0.105
NORMAL PENTANE	0.329	0.119
HEXANES	0.915	0.375
TOTAL	100.000	4.147

PROPANE GPM:	0.94	BUTANES GPM:	0.43
ETHANE GPM:	2.18	PENTANES PLUS GPM:	0.60

SPECIFIC GRAV (CALC): 0.6853
MOLE WEIGHT: 19.85

HHV-BTU/CU FT PRESSURE (PSIA)	WET	DRY
14.696	1177	1198
14.650	1173	1194
14.730	1180	1201
14.735	1180	1201

DEANE SIMPSON

JARREL SERVICES, INC.

POST OFFICE BOX 1654 PHONES 505 393-5396 — 393-6274

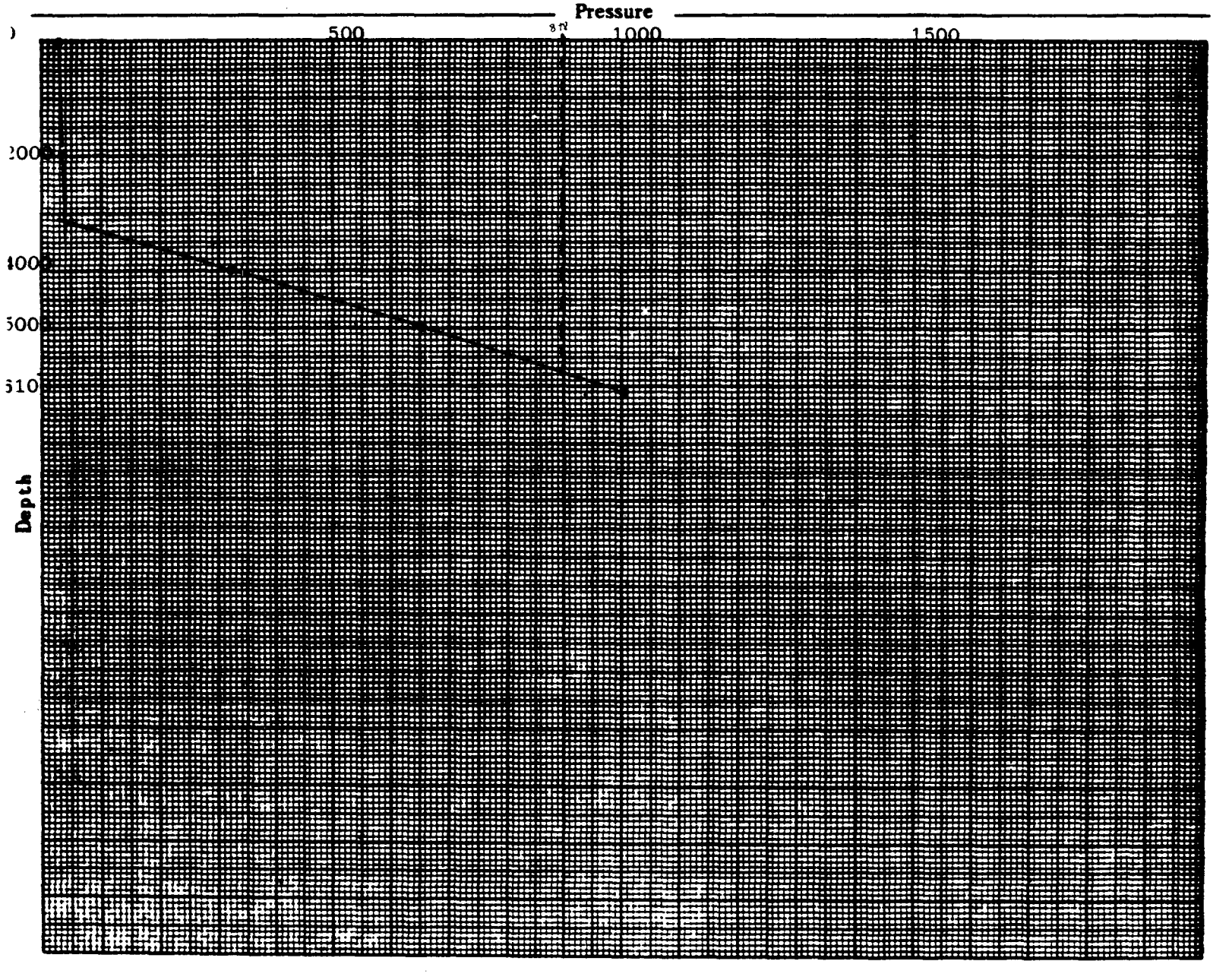
HOBBS, NEW MEXICO 88240

OPERATOR Exxon Company USA
FIELD B-D-T
FORMATION Drinkard
LEASE New Mexico V State WELL No. 3
COUNTY Lea STATE New Mexico
DATE 8/14/85 TIME 11:00 AM
Status Shut in
Test Depth 6100'
Time S. I. 7 days Last test date -
Tub Pres. 29 BHP last test -
Cas. Pres. Dual BHP change -
Elev. 3463'DF Fluid top 3136'
Datum (-3026)* Water top None
Temp. @ - Run by JSI #13
Cal. No. 42254 Chart No. 6

BOTTOM HOLE PRESSURE RECORD

Depth	Pressure	Gradient
0	29	-
2000	33	.002
4000	322	.145
5000	654	.332
6100	1002	.316
6489 (-3026)	1125 * **	(.316)

* EXTRAPOLATED PRESSURE
** MIDPOINT OF CASING PERFORATIONS



NEW-TEX LAB

PHONE 505/393-3561 • P. O. BOX 1161 • 611 W. SNYDER • HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT:	EXXON COMPANY USA	ANALYSIS NUMBER:	7808
ADDRESS:	1700 W BROADWAY	DATE OF RUN:	8 12 85
CITY, STATE:	ANDREWS, TX 79714	DATE SECURED:	8 12 85

SAMPLE IDENT: "V" STATE #11 - TUBB GAS
SAMPLING PRESS:22 PSIG SAMPLING TEMP:90 DEG F

REMARKS: WELL SHUT IN INDEFINITE TIME; TUBB GAS
REMARKS: NO OIL FOR SAMPLE
REMARKS: H2S - NONE DETECTED

********* GAS ANALYSIS *********

	MOLE PERCENT	GAL/ MCF
NITROGEN	1.032	
CARBON DIOXIDE	0.127	
METHANE	82.293	
ETHANE	7.746	2.066
PROPANE	4.012	1.101
ISO-BUTANE	0.484	0.158
NORMAL BUTANE	1.518	0.477
ISO-PENTANE	0.482	0.177
NORMAL PENTANE	0.698	0.252
HEXANES	1.608	0.660
TOTAL	100.000	4.891

PROPANE GPM:	1.10	BUTANES GPM:	0.64
ETHANE GPM:	2.07	PENTANES PLUS GPM:	1.09

SPECIFIC GRAV (CALC): 0.7283
MOLE WEIGHT: 21.09

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
	14.696	1239	1261
	14.650	1235	1257
	14.730	1241	1263
	14.735	1242	1264

DEANE SIMPSON

NEW-TEX LAB

PHONE 505/393-3561 • P. O. BOX 1161 • 611 W. SNYDER • HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT:	EXXON COMPNY USA	ANALYSIS NUMBER:	7807
ADDRESS:	1700 W BROADWAY	DATE OF RUN:	8 12 85
CITY, STATE:	ANDREWS, TX 79714	DATE SECURED:	8 12 85

SAMPLE IDENT: "V" STATE #6 - DRINKARD ZONE
SAMPLING PRESS:25 PSIG SAMPLING TEMP:93 DEG F

REMARKS: WELL SHUT IN INDEFINITE TIME; BLINEBRY
REMARKS: ZONE - NO CONNECTION
REMARKS: H2S - NONE DETECTED

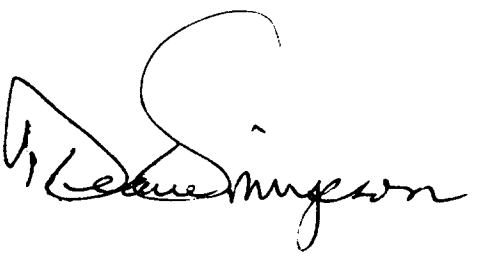
********* GAS ANALYSIS *********

	MOLE PERCENT	GAL/ MCF
NITROGEN	1.030	
CARBON DIOXIDE	0.069	
METHANE	85.818	
ETHANE	8.500	2.267
PROPANE	2.949	0.810
ISO-BUTANE	0.264	0.086
NORMAL BUTANE	0.745	0.234
ISO-PENTANE	0.138	0.051
NORMAL PENTANE	0.176	0.064
HEXANES	0.311	0.128
TOTAL	100.000	3.640

PROPANE GPM:	0.81	BUTANES GPM:	0.32
ETHANE GPM:	2.27	PENTANES PLUS GPM:	0.24

SPECIFIC GRAV (CALC): 0.6572
MOLE WEIGHT: 19.03

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
	14.696	1132	1152
	14.650	1128	1148
	14.730	1135	1155
	14.735	1135	1155



DEANE SIMPSON

Estimated Effects on the Value of Total Production from Proposed Downhole Commingling[1]

New Mexico "V" State #7

Before Downhole Commingling

	BPD Oil Volume	Oil Price	MCF/Day Gas Volume	Gas Price	Daily Oil and Gas Value
Blinebry	0	N/A	0	N/A	0
Tubb	4	$13.90	32	$1.28	$96.56
Drinkard	0	N/A	0	N/A	0
					96.56

After Downhole Commingling

BPD Oil Volume	Oil Price	MCF/Day Gas Volume	Gas[2] Price	Daily Oil and Gas Value	Increase in Daily Value
28	$13.90	385	$.84	$712.60	$616.04

1. Production volumes and prices based on March, 1986 data.

2. If gas split between two purchasers-assumed lower price prevails after commingling.

Allocation Of Oil Production To Each Zone

Equations Used:

Decline Rates (1) $q = q_i e^{-at}$

(2) $a_n = \frac{\ln (q_i/q)}{t}$

a_n = nominal decline, per yr.
q_i = initial rate, BO/Day
q = later rates, BO/Day
t = time between rates, yrs.

Decline rate computations:

Blinebry Zone

q_i = 16 BOPD
q = 4 BOPD
t = 3 years

$a_n = \frac{\ln (16/4)}{3}$

a_n (Blinebry) = 0.4621/yr.

Tubb Zone

q_i = 8 BOPD
q = 4 BOPD
t = 3 years

$a_n = \frac{\ln (8/4)}{3}$

a_n (Tubb) = 0.2310/yr.

Based on N. M. "V" State #11, a direct offset

Drinkard Zone

q_i = 4 BOPD
q = 2 BO/Day
t = 3 years

$a_n = \frac{\ln (4/2)}{3}$

a_n (Drinkard) = 0.2310/yr.

Based on an average of N. M. "V" State No. 3, a direct offset.

Actual Allocation:

x_b = Blinebry Allocation, fraction.
x_t = Tubb Allocation, fraction.
x_d = Drinkard Allocation, fraction.
q_b = Blinebry rate, BOPD.
q_t = Tubb rate, BOPD.
q_d = Drinkard rate, BOPD.
q_{bi} = Blinebry initial rate, BOPD.
q_{ti} = Tubb initial rate, BOPD.
q_{di} = Drinkard initial rate, BOPD.

$$x_b = \frac{q_b}{q_b + q_t + q_d} \qquad x_t = \frac{q_t}{q_b + q_t + q_d} \qquad x_d = 1 - x_b - x_t$$

$$\frac{1}{x_b} = \frac{q_b + q_t + q_d}{q_b} = \frac{q_d + q_t}{q_b} + 1$$

$$x_b = \left[\frac{q_d + q_t}{q_b} + 1\right]^{-1}$$

Substituting eq. (1)

$$x_b = \left[\frac{q_{di}e^{-a_d t} + q_{ti}e^{-a_t t}}{q_{bi}e^{-a_b t}} + 1\right]^{-1}$$

q_{bi} = 16 BOPD
a_n(Blinebry) = 0.4621/yr.

q_{ti} = 8 BOPD
a_n(Tubb) = 0.2310/yr.

q_{di} = 4 BOPD
a_n(Drinkard) = 0.2310/yr.

$$x_b = \left[\frac{4e^{-(0.2310)t} + 8e^{-(0.2310)t}}{16e^{-(0.4621)t}} + 1\right]^{-1}$$

Where t = time between January 1, 1973 and current date, years.

$$x_t = \left[\frac{q_b + q_d}{q_t} + 1\right]^{-1}$$

Substituting eq. (1)

$$x_t = \left[\frac{q_{bi}e^{-a_b t} + q_{di}e^{-a_d t}}{q_{ti}e^{-a_t t}} + 1\right]^{-1}$$

$$x_t = \left[\frac{16e^{-(0.4621)t} + 4e^{-(0.2310)t}}{8e^{-(0.2310)t}} + 1\right] - 1$$

Where t = time between January 1, 1973 and current date, years.

$$x_d = 1 - x_b - x_t$$

Allocation of Gas Production To Each Zone

Decline Rate Computations:

Blinebry Zone

q_i = 190 kCF/D
q = 47 kCF/D
t = 3 years

$$a_n = \frac{\ln (190/47)}{3}$$

a_n (Blinebry) = 0.4656/yr

Tubb Zone

q_i = 150 kCF/Day
q = 60 kCF/Day
t = 3 years

$$a_n = \frac{\ln (150/60)}{3}$$

a_n (Tubb) = 0.3054/yr

Based on N. M. "V" State #11, a direct offset.

Drinkard Zone

q_i = 45 kCF/D
q = 38 kCF/D
t = 3 years

$$a_n = \frac{\ln (45/38)}{3}$$

a_n (Drinkard) = 0.0564/yr

Based on an average of N. M. "V" State #3, a direct offset.

Actual Allocations:

q_{bi} = 190 kCF/Day
a_n (Blinebry = 0.4656/yr

q_{ti} = 150 kCF/Day
a_n (Tubb) = 0.3054/yr

q_{di} = 45 kCF/Day
a_n (Drinkard) = 0.0564/yr.

$$x_b = \left[\frac{q_{di} e^{-a_d t} + q_{ti} e^{-a_t t}}{q_{bi} e^{-a_b t}} + 1 \right]^{-1}$$

$$x_b = \left[\frac{45e^{-(0.0564)t} + 150e^{-(0.3054)t}}{190e^{-(0.4656)t}} + 1 \right]^{-1}$$

$$x_t = \left[\frac{q_{bi} e^{-a_b t} + q_{di} e^{-a_d t}}{q_{ti} e^{-a_t t}} + 1 \right]^{-1}$$

$$x_t = \left[\frac{190e^{-(0.4656)t} + 45e^{-(0.0564)t}}{150e^{-(0.3054)t}} + 1 \right]^{-1}$$

Where t = time between January 1, 1973 and current date, years.

$$x_d = 1 - x_b - x_t$$

OFFSET OPERATORS
TO EXXON'S N. M. "V" STATE LEASE
LEA COUNTY, NEW MEXICO

Conoco
P. O. Box 1959
Midland, Texas 79702

Aztec Energy Corp.
1206 E. 20th St.
Farmington, New Mexico 87401

Bravo Energy Inc.
P. O. Box 2160
Hobbs, New Mexico 88240

Texaco Producing Inc.
P. O. Box 3000
Tulsa, Oklahoma 74101

Chevron U.S.A., Inc.
Attn: J. C. Prindle
P. O. Box 670
Hobbs, New Mexico 88240

Amoco
P. O. Box 3092
Houston, Texas 77253

Southland Royal ty
Attn: A. W. Lang
21 Desta Drive
Midland, Texas 79705

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

TONEY ANAYA
GOVERNOR

April 25, 1986

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:
MC _____
DHC XX
NSL _____
NSP _____
SWD _____
WFX _____
PMX _____

Gentlemen:

I have examined the application for the:

Exxon Co. New Mexico V State #7-N - 10-21-37
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

has a gas zone -- JS

Yours very truly,

Jerry Sexton
Supervisor, District 1

/mc