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

PRODUCTION DEPARTMENT
SOUTHWEST/ROCKY MOUNTAIN DIVISION

J.K. LYTLE
SENIOR TECHNICAL ADVISOR
REGULATORY AFFAIRS

December 27, 1985

Downhole Commingling Request
J. L. Greenwood #11
Lea County, New Mexico

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

ATTENTION: Mr. David Catanach

Gentlemen:

Exxon respectfully requests NMOCD approval to downhole commingle the Blinebry and Drinkard formations in the J. L. Greenwood #11. Permission to dually complete this well was authorized by administrative order DC-119. 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 two zones.

A packer leakage test showed the two zones to be in communication. The NMOCD has ordered Exxon to repair this well and submit another packer leakage test. The Andrews District has evaluated the costs associated with this repair and has determined that it will be uneconomical to repair this leak. If downhole commingling is not approved, the Blinebry will be squeezed and the Drinkard will be placed on rod pump, as we feel the Drinkard has more potential than the Blinebry. It is doubtful that the Blinebry will be reperfed in the future due to its low potential. Downhole commingling is being requested to prevent this waste.

The Blinebry and Drinkard zones currently satisfy the requirements necessary to apply for downhole commingling (see Attachment 1). The items Exxon must submit to the Commission to obtain approval are listed on Attachment 2, and subsequent attachments contain the data noted in Attachments 1 and 2.

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

Yours truly,

J. K. Lytle

J. K. Lytle

JKL:djc
Attachments

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

ATTACHMENT 1

J. L. Greenwood #11 - Downhole Commingling - Requirements

The Blinebry and Drinkard formations in the above well satisfy 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. Currently neither zone is able to flow. 6540' is the depth of the bottom perforation in the Drinkard formation.*

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

3. *Neither zone produces more than 40 BWPD. Neither zone is now able to flow.*

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. Current plans are to commingle these zones for waterflood in the proposed Blinebry-Drinkard Waterflood Unit.*

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

J. L. Greenwood #11 - 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:*

   Jessie L. Greenwood No. 11, 1880' FSL, 760' FEL, Section 9, T-22-S, R-37-E, Lea County, New Mexico. Pools to be commingled: Blinebry and Drinkard. Authorization to dually complete-Order No. DC-119.

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:*

   Estimated BHP - Drinkard 760 psig. Estimated BHP - Blinebry 638 psig. Common datum - mid perfs of Blinebry (5600').

   Calculations 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. 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: Oil 0%, Gas 85.7%
Drinkard Pool: Oil100%, Gas 14.3%

The allocation of gas production to each zone is based on the ratios of current production.

$$Q_d = Q_t \left[1 + \frac{Q_b i}{Q_{di}}\right]^{-1} \quad \text{or} \quad Q_b = Q_t \left[1 + \frac{Q_{di}}{Q_{di}}\right]^{-1}$$

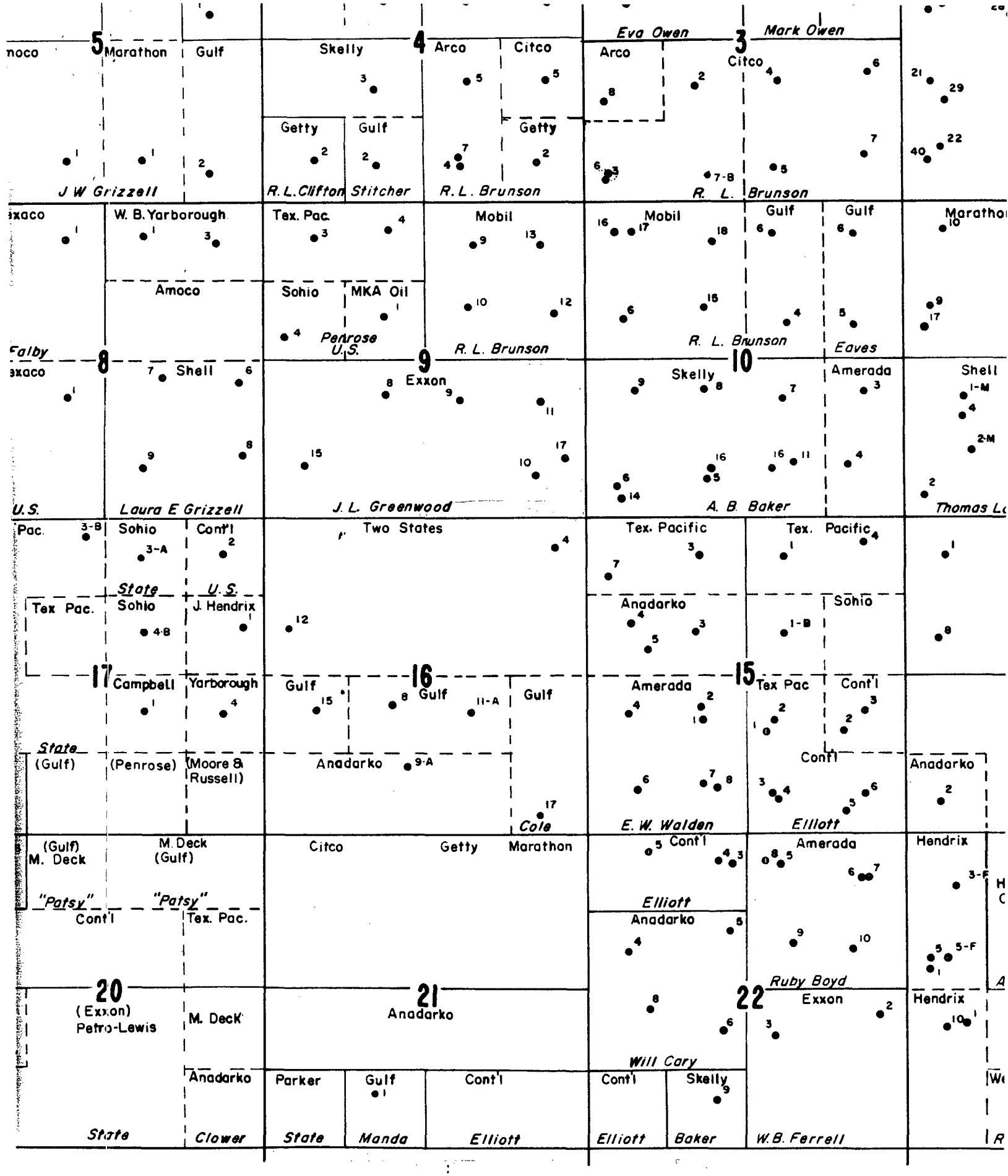
Q_t = *Total well production, kcf.*
Q_b = *Production from Blinebry, kcf/D.*
Q_d = *Production from Drinkard, kcf/D*
Q_{bi} = *Initial Blinebry rate, 36 kcf/D*
Q_{di} = *Initial Drinkard rate, 6 kcf/D*

Initial rates are based on 1985 average production.

100% of the oil production is expected to be from the Drinkard. The small amount of liquid column on the Blinebry is attributed to the packer leak. The Blinebry quit making oil several years ago.

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.



DEDICATED ACREAGE -160 ACRES

EXXON COMPANY, U. S. A.

ION DEPARTMENT

ANDREWS DISTRICT

116-0057E

INDIVIDUAL WELL TEST REPORT

DO NOT WRITE IN SHADED AREAS – DIVISION OFFICE USE ONLY

DATE 7-3-85

LEASE: J.L. GREENWOOD

TYPE TEST: Packer Leakage

FIELD: Blinebry

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

WELL NO. 11

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	REC TYPE	BATT	SUB BATT	ITEM	ZONE	ITEM	COMPLETION NUMBER (SEC CODE / WELL NO.)	ITEM	DSC	ITEM	TEST DATE (MO / DAY / YR)	ITEM	ELAPSED TEST TIME (HRS / 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 5									00	06 29 85	01	24 00	02				03		04		05

PUMPING WELLS ONLY

LENGTH OF STROKE	ITEM	STROKES PER MINUTE	ITEM	PUMP SIZE (INCHES)	ITEM	TIME PUMPED DURING TEST (HRS / MIN)	ITEM
39 40 41 42 43		44 45 46 47		48 49 50 51		52 53 54 55	
	06	.	07	.	08		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	0.	10	0.	11	0.	12	.	13		14	Open	15		16		17		18	55	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	.375	31	150	32	100	33	3.5	34	7.5	35	26	36	.	37		38		39		40

El Paso Meter

28.348 X 0.0804 X 1.2403 X [illegible]

33.7 V 2.25 X 3.5 X 7.5 X 02[illegible]

26.010

INPUT GAS LIFT DATA

KP ONLY	INTER-MITTER TIME (HRS / MIN)	ITEM	INTER-MITTER INTERVAL (HRS / MIN)	ITEM	GAS LIFT CHOKE DATA: INPUT LINE PRESSURE	ITEM	GAS LIFT CHOKE DATA: CHOKE SIZE	ITEM
1 2 3	26 27 28 29		30 31 32 33		34 35 36 37 38		39 40 41 42	
A 0 4		50		51		52		53

ENTER EITHER ITEM 54 THRU 59 OR ITEM 60

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
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
.	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 - Cent. Pump
2 - Rod Pump
3 - Plunger
4 - Hydraulic
5 - Kobe
6 - Other

PRIME MOVER

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

SIGNATURE [signature]

116-0057E

INDIVIDUAL WELL TEST REPORT

DO NOT WRITE IN SHADED AREAS – DIVISION OFFICE USE ONLY

DATE: 7-3-85

LEASE	TYPE TEST
J.L. GREENWOOD	Packer Leakage

FIELD	METHOD OF PRODUCTION (CHECK ONE)	WELL NO.	CAL DAY ALLOW.	SCHED. DAY ALLOW.
DRINKARD	☐ PUMP ☑ FLOW ☐ GAS LIFT	11	—	

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

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

FORS TAG INFORMATION

KP ONLY	REC TYPE	BATT	SUB BATT	ITEM	ZONE	ITEM	COMPLETION NUMBER: SEQ CODE	COMPLETION NUMBER: WELL NO.	ITEM	DEC	ITEM	TEST DATE MO	DAY	YR	ITEM	ELAPSED TEST TIME HRS	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	07	01	85	01	24	00	02				03		04		05

PUMPING WELLS ONLY

LENGTH OF STROKE	ITEM	STROKES PER MINUTE	ITEM	PUMP SIZE INCHES	ITEM	TIME PUMPED DURING TEST HRS	MIN	ITEM
39 40 41 42 43		44 45 46 47		48 49 50 51		52 53	54 55	
	06	.	07	.	08			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	0	10	0	11	0.	12	.	13		14	.500	15	.25	16		17		18	25	19	60	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 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						56 57	
A 0 3	4.000	30	0.125	31	100	32	100	33	2.7	34	5.1	35	1	36	.	37		38		39		40

3.172 X 0.9804 X 1.2403 X 0.9777 =
3.771 X 2.7 X 5.1 X .024 =
1.246

INPUT GAS LIFT DATA

GAS LIFT CHOKE DATA

ENTER EITHER ITEM 54 THRU 59 OR ITEM 60

KP ONLY	INTER-MITTER TIME HRS	MIN	ITEM	INTER-MITTER INTERVAL HRS	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 pumped 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
1 Scheduled GO-2
2 Special GO-2
3 Routine GO-2
4 Potential or Repotential
5 Allocation
6 Information
7 Monthly GO-2

GAS
50 Initial G-2
51 Routine G-2
52 Special G-2
53 Routine G-3
54 Special G-3
55 Routine G-4
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

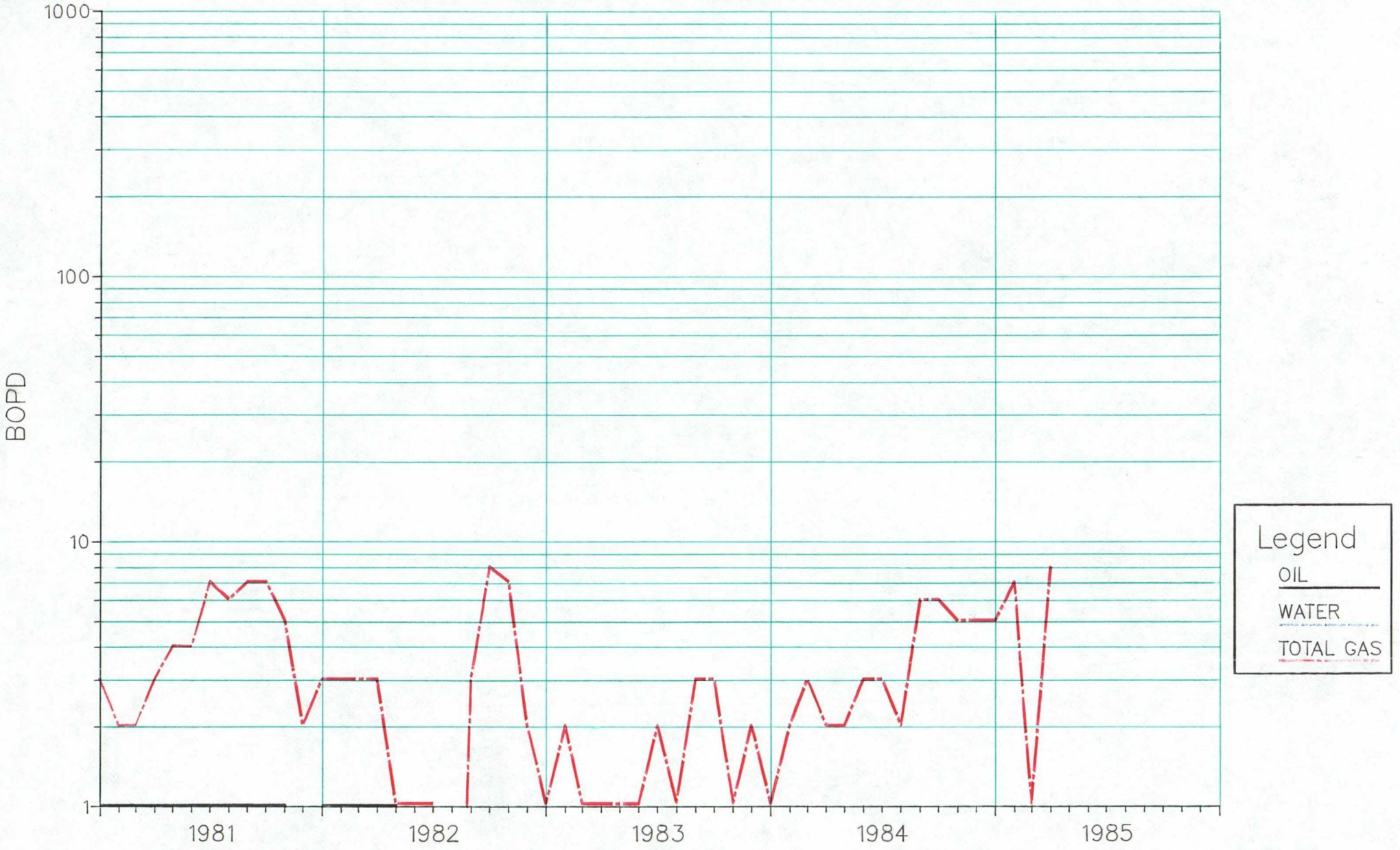
CODES –
1 Centrifical
2 Rod Pump
3 Plunger
4 Hydraulic
5 Kobe
6 Other

PRIME MOVER

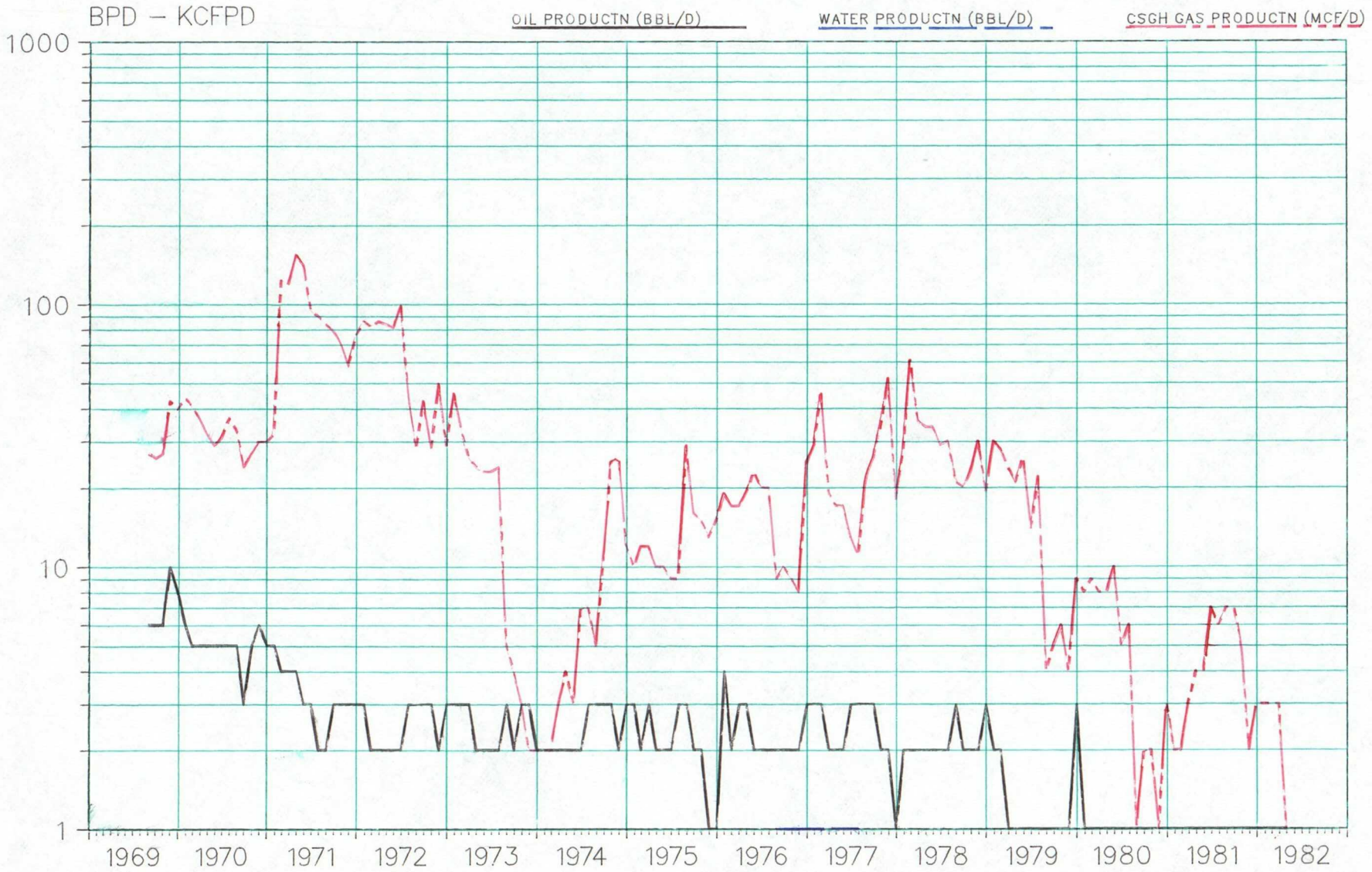
CODES –
1 Gas Engine
2 Electric Motor
3 Other

SIGNATURE: [signature]

J. L. GREENWOOD 11
DRINKARD



DISTRICT – 03 ANDREWS
FIELD – 0306 PADDOCK
RESERVOIR – 470 DRINKARD
WELL– 0011 LSE–29270 JL GREENWOOD



CALCULATIONS OF
STATIC BOTTOM-HOLE PRESSURES

Equations to Be Used:

$P_{sfs} = P_{whs} * e^{c/\bar{z}} + P_{ls}$ where: $c = (\gamma_g)\frac{(TVD)}{53.34\ \bar{T}}$ (Applied Petroleum Reservoir Engineering, Craft and Hawkings, Pg. 26)

P_{sfs} = Static sandface pressure, psia

P_{whs} = Static wellhead pressure, psia

P_{ls} = Static Head of fluid column, psia

e = 2.7183

γ_g = Gas gravity

TVD = True vertical depth, feet

$\bar{T}$ = Average Temperature, ^{o}R

$\bar{z}$ = Average compressibility factor

Assumptions:

Patm = 14.7 psia

Temp. Grad. = 0.011 F/ft

Liquid Grad. = 0.3 psi/ft

Blinebry Zone:

γ_g = 0.7023 calculated from gas analysis

P_{whs} = 412 psia

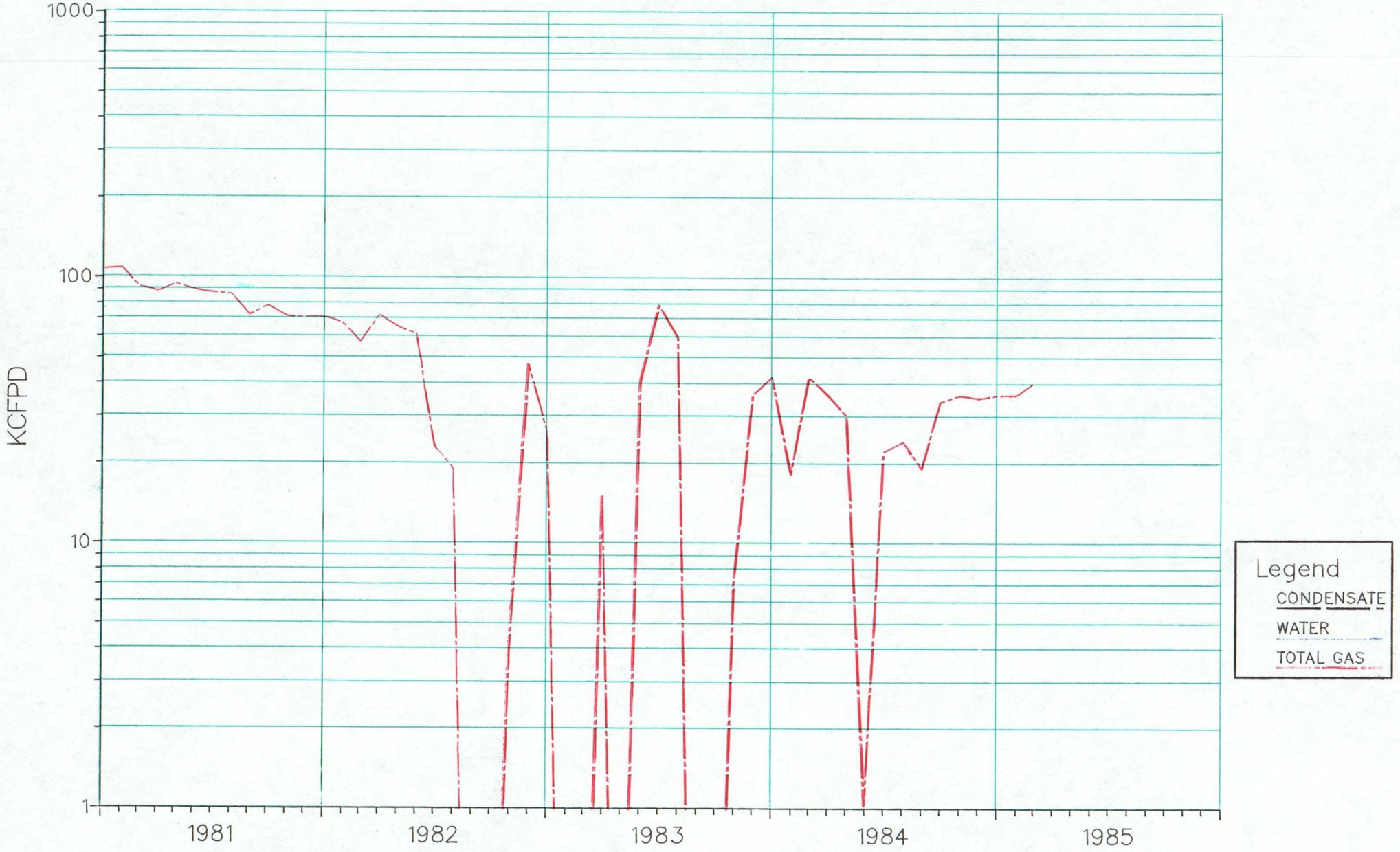
TVD = 5033' (Top of fluid)

TVD = 5600' (mid Perfs)

$\bar{T}$ = (82 + 134) (0.5) = 108 ^{o}F = 568 ^{o}R

$c = \frac{(0.7023)(5033)}{(53.34)(568)} = 0.117$

J. L. GREENWOOD 11
BLINEBRY



Trial and Error Solution

P_{pc} = 676 psia

T_{pc} = 402 ^{o}R
(Based on volumetric averages)

T_r = 568/402 = 1.41

Assume: P_{sfs} = 470 psia - Due to gas

$P = (470 + 412)/2 = 441$ psia

$P_r = 441/617 = 0.715$

$\bar{z} = 0.915$

$P_{sfs} = (412)e^{.117/.915} = 468$ psia

Assume: P_{sfs} = 468 psia - Due to gas

$P = (468 + 412)/2 = 440$ psia

$P_r = 440/617 = 0.713$

$\bar{z} = 0.916$

$P_{sfs} = (412)e^{.117/.916} = 468$ psia

$P_{ls} = .3\ (5600 - 5033) = 170$ psia

Total static sandface pressure P_{sfs} = 468 psia + 170 psia = 638 psia
P_{sfs} = 638 psia for Blinebry

Drinkard Zone:

P_{sfs} = 760 psia Measured at common datum - midperfs of Blinebry (5600'). Pressure measurement attached.

JARREL SERVICES, INC.

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

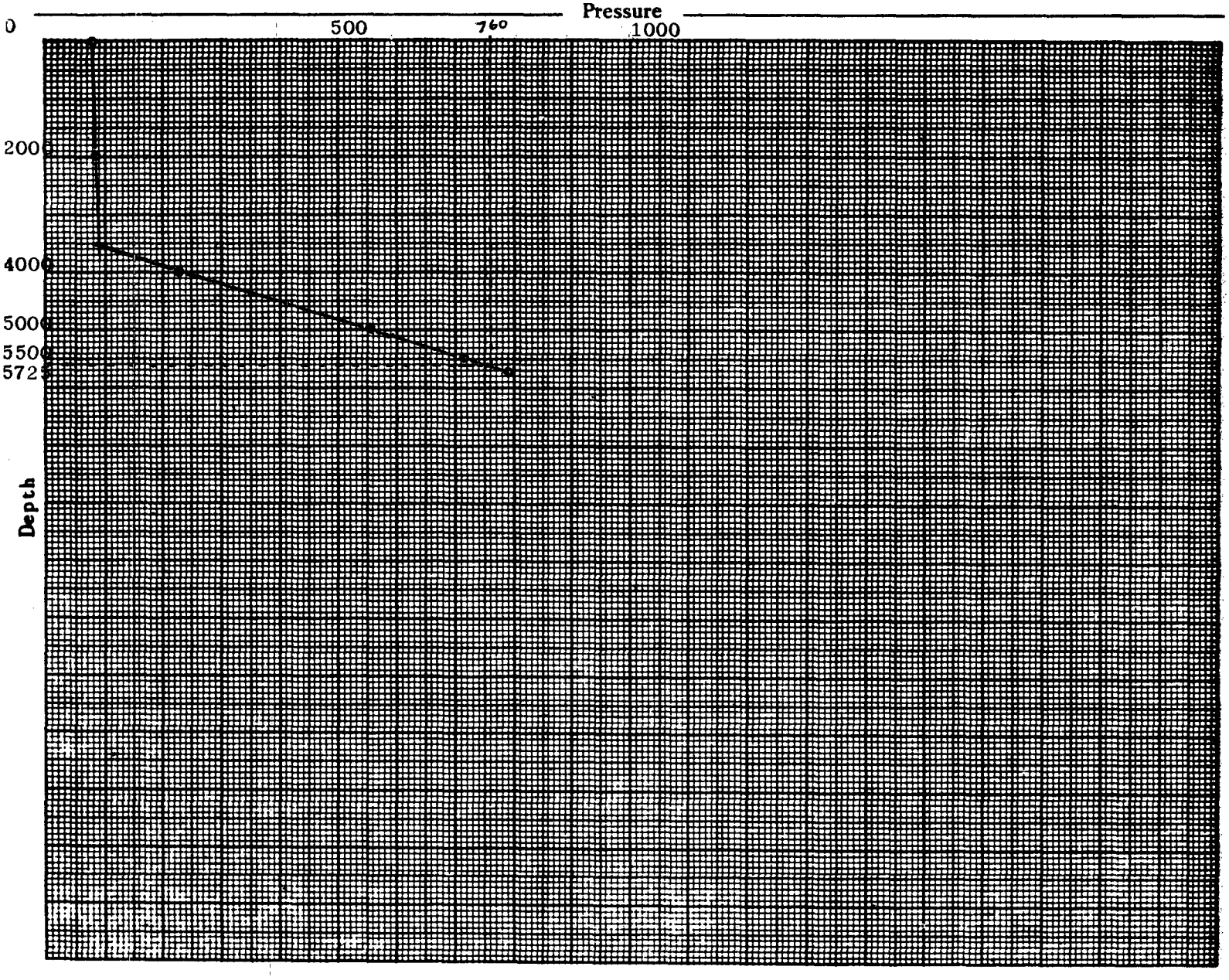
HOBBS, NEW MEXICO 88240

OPERATOR Exxon Company USA
FIELD Drinkard
FORMATION Drinkard
LEASE J.L. Greenwood WELL No. 11
COUNTY Lea STATE New Mexico
DATE 6/15/85 TIME 12:00 N
Status Shut in
Test Depth 5725'+
Time S. I. 48.0 hrs Last test date –
Tub Pres. 78 BHP last test –
Cas. Pres. PKR BHP change –
Elev. 3429'KB Fluid top 3570'
Datum (-3052)** Water top None
Temp. @ 113°F Run by JSI #21
Cal. No. 4586 Chart No. 2

BOTTOM HOLE PRESSURE RECORD

Depth	Pressure	Gradient
0	78	–
2000	83	.003
4000	228	.073
5000	554	.326
5500	717	.326
5725 +	790	.324
6481 (-3052)	1035 * **	(.324)

\+ HIT OBSTRUCTION @ 5750'
* EXTRAPOLATED PRESSURE
** MIDPOINT OF CASING PERFORATIONS



JARREL SERVICES, INC.
PHONE (505) 393-1736
HOBBS, NEW MEXICO, 88240

PRESSURE TRANSIENT TEST DATA

COMPANY: Exxon Company USA
LEASE: J.L. Greenwood
FIELD: Drinkard
COUNTY: Lea
STATUS: 30 minute flow; 48 hour shut-in

CONTACT: Carter Copeland
WELL: #11
ZONE: Drinkard
STATE: New Mexico
OPERATOR: Friese

PERFORATIONS FROM: 6,422.0'
DEPTH: 5,725.0'

TO: 6,540.0'
TEMPERATURE: 113.0'F

ELEMENT: 20275
CLOCK: 21499
ELEMENT: 4586
CLOCK: E5374

RANGE: 3150 psig
RANGE: 72 hrs
RANGE: 3975 psig
RANGE: 72 hrs

SURFACE PRESSURE MEASUREMENTS

EVENT	DATE	TIME	DEAD WEIGHT PRESSURE
START CLOCK	06/13/85	11:00:00	8.0 psig
SET ELEMENT	06/13/85	11:30:00	8.0 psig
WELL SHUT IN	06/13/85	12:00:00	8.0 psig
TEST ENDED	06/15/85	12:00:00	78.0 psig

SUBSURFACE PRESSURE MEASUREMENTS

DATE	TIME	t hrs	GAUGE PRESSURE psig	ABSOLUTE PRESSURE psia	RESERVOIR PRESSURE psia
06/13/85	11:30:00	-.500	729.0	742.2	987.2
06/13/85	12:00:00	0.000	729.0	742.2	987.2
06/13/85	12:15:00	.250	733.0	746.2	991.2
06/13/85	12:30:00	.500	737.0	750.2	995.2
06/13/85	12:45:00	.750	739.0	752.2	997.2
06/13/85	13:00:00	1.000	741.0	754.2	999.2
06/13/85	14:00:00	2.000	741.0	754.2	999.2
06/13/85	15:00:00	3.000	741.0	754.2	999.2
06/13/85	16:00:00	4.000	743.0	756.2	1,001.2
06/13/85	17:00:00	5.000	743.0	756.2	1,001.2
06/13/85	22:00:00	10.000	743.0	756.2	1,001.2
06/14/85	03:00:00	15.000	745.0	758.2	1,003.2
06/14/85	08:00:00	20.000	747.0	760.2	1,005.2
06/14/85	13:00:00	25.000	747.0	760.2	1,005.2
06/14/85	18:00:00	30.000	753.0	766.2	1,011.2
06/14/85	23:00:00	35.000	763.0	776.2	1,021.2
06/15/85	04:00:00	40.000	776.0	789.2	1,034.2
06/15/85	09:00:00	45.000	786.0	799.2	1,044.2
06/15/85	12:00:00	48.000	790.0	803.2	1,048.2

NEW-TEX LAB

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

ANALYSIS CERTIFICATE

CLIENT: EXXON CO USA
ADDRESS: 1700 W BROADWAY
CITY, STATE: ANDREWS TX 79714

ANALYSIS NUMBER: 7586
DATE OF RUN: 07 15 85
DATE SECURED: 07 15 85

SAMPLE IDENT: J L GREENWOOD #11
SAMPLING PRESS: 44 PSIG
SAMPLING TEMP: 82 DEG F

REMARKS: CASING SIDE - Blinebry

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

	MOLE PERCENT	GAL/ MCF
NITROGEN	0.942	
CARBON DIOXIDE	0.390	
METHANE	81.182	
ETHANE	10.083	2.689
PROPANE	4.671	1.282
ISO-BUTANE	0.486	0.159
NORMAL BUTANE	1.286	0.404
ISO-PENTANE	0.243	0.089
NORMAL PENTANE	0.329	0.119
HEXANES	0.388	0.159
TOTAL	100.000	4.901

PROPANE GPM: 1.28
ETHANE GPM: 2.69
BUTANES GPM: 0.56
PENTANES PLUS GPM: 0.37

SPECIFIC GRAV (CALC): 0.7023
MOLE WEIGHT: 20.34

HHV-BTU/CU FT PRESSURE (PSIA)	WET	DRY
14.696	1194	1216
14.650	1191	1212
14.730	1197	1218
14.735	1197	1219

DEANE SIMPSON

ORIGINAL SIGNED BY
DEANE SIMPSON

NEW-TEX LAB

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

ANALYSIS CERTIFICATE

CLIENT: EXXON CO USA
ADDRESS: 1700 W BROADWAY
CITY, STATE: ANDREWS TX 79714

ANALYSIS NUMBER: 7585
DATE OF RUN: 07 15 85
DATE SECURED: 07 15 85

SAMPLE IDENT: J L GREENWOOD #11
SAMPLING PRESS: 30 PSIG
SAMPLING TEMP: 88 DEG F

REMARKS: TUBING SIDE - Drinkard

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

	MOLE PERCENT	GAL/ MCF
NITROGEN	0.536	
CARBON DIOXIDE	0.272	
METHANE	82.745	
ETHANE	9.717	2.592
PROPANE	4.311	1.183
ISO-BUTANE	0.366	0.119
NORMAL BUTANE	1.158	0.364
ISO-PENTANE	0.223	0.082
NORMAL PENTANE	0.306	0.111
HEXANES	0.366	0.150
TOTAL	100.000	4.601

PROPANE GPM: 1.18
ETHANE GPM: 2.59
BUTANES GPM: 0.48
PENTANES PLUS GPM: 0.34

SPECIFIC GRAV (CALC): 0.6893
MOLE WEIGHT: 19.96

HHV-BTU/CU FT. PRESSURE (PSIA)	WET	DRY
14.696	1184	1205
14.650	1180	1201
14.730	1187	1208
14.735	1187	1208

DEANE SIMPSON

ORIGINAL SIGNED BY
DEANE SIMPSON

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

J. L. Greenwood #11

Before Down Hole Commingling

	BPD Oil Volume	Oil Price	MCF/Day Gas Volume	Gas Price	Daily Oil and Gas Value
Blinbry	0	N/A	1	1.28	1.28
Drinkard	0	N/A	31	N/A	26.04
					$27.32

After Down Hole Commingling

BPD Oil Volume	Oil Price	MCF/Day Gas Volume	Gas[2] Price	Daily Oil And Gas Value	Difference in Daily Value
35	27.86	500	.84	1395.10	
				$1395.10	$1367.78

1. Production volumes and prices based on September 1985 data

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

OFFSET OPERATORS
TO EXXON'S J. L. GREENWOOD LEASE
LEA COUNTY, NEW MEXICO

MKA
Address Unknown

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

Conoco Inc.
P. O. Box 1959
Midland, Texas 79702

Shell Western E&P Inc.
P. O. Box 991
Houston, Texas 77253

Amoco
P. O. Box 3092
Houston, Texas 77253

Sohio
P. O. Box 3167
Midland, Texas 79701

Sun Exploration & Production Co.
P. O. Box 2880
Dallas, Texas 75221-2880

Mobil
P. O. Box 1900
Midland, Texas 79702

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

J. H. Hendrix
403 Wall Towers West
Midland, Texas 79701

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE
December 31, 1985

TONEY ANAYA
GOVERNOR

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 X
NSL _____
NSP _____
SWD _____
WFX _____
PMX _____

Gentlemen:

I have examined the application for the:

Exxon Corp. J. L. Greenwood No. 11-I 9-22-37
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

O.K.---J.S.

Yours very truly,

Jerry Sexton
Supervisor, District 1

/mc