STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

Date: 3/11/93

Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

RE: Proposed MC
Proposed NSL
Proposed WFX
Proposed NSP
Proposed DHC X
Proposed SWD
Proposed PMX
Proposed DD

Gentlemen:

I have examined the application received on 3/11/93

for the Exxon OPERATOR Ayden Rent #8 LEASE & WELL NO.

C 19-25N-3W UL-S-T-R and my recommendations are as follows:

Exxon

Yours truly,

Texaco Exploration and Production Inc 3300 N. Butler
Farmington, NM 87401

February 8, 1993

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
PO BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504

Attention: Michael E. Stogner
Chief Hearing Officer/Engineer

RE: **Application for exception to NMOCD Rule 303-A:Downhole Commingle Lydia Rentz 8, Sec 19-T25N-R3W, NMPM, Rio Arriba County, New Mexico**

Dear Mr. Stogner:

Texaco respectfully requests administrative approval to downhole commingle the Blanco Mesa Verde Gas Pool and the West Lindrith Gallup-Dakota Oil Pool within the referenced wells. Please accept the attached information, in addition to the original request, dated November 23, 1992 in your consideration of this matter. All offset operators were notified of the original request by Certified Mail and have been sent a copy of this additional information.

If you have any questions concerning this matter please contact Mr. Darren Segrest at (505) 325-4397, ext 22. Your attention to this matter is greatly appreciated.

Sincerely,

Ted A. Tipton
AREA MANAGER

DBS/s

Attachments
NMOCD - Aztec
file

Application for Exception to Rule 303-SEGREGATION OF PRODUCTION FROM POOLS

D. REQUIREMENTS

(1) **Name and address of the operator.**

Texaco Exploration and Production Inc.
3300 N. Butler Suite 100
Farmington, NM. 87401

(2) **Lease name, well number, well location, name of the pools to be commingled.**

Lease name: Lydia Rentz
Well number: 8
Well location: 790' FNL & 1785' FWL,
Sec. 19. T25N-R3W, NMPM
Rio Arriba County, New Mexico
Pools commingled: Blanco - Mesa Verde
West Lindrith, Gallup - Dakota

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

Attached. **(attachment I)**

(4) **A current (within 30 days) 24-hour productivity test on Division Form C-116 showing the amount of oil, gas, and water produced from each zone.**

Attached. **(attachment II)**

(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. (This requirement may be dispensed with in the case of a newly completed or recently completed well which gas little of no production history. However, a complete resume of the well's completion history including description of treating, testing, etc., of each zone, and a prognostication of future production from each zone shall be submitted.)**

Gallup - Dakota Decline curves attached. **(attachment III)**

Mesa Verde - New completion, no production history available. The Mesa Verde formation was perforated and stimulated in a single stage. On November 5, 1992 the Mesa Verde was perforated from 5805'-5820' using 4 JSPF. The fluid was swabbed off the perforated interval and the interval was flow tested for a 24 hour period on a 3/4" orifice plate. The gas volume was calculated to be ~400 MCFD at a differential pressure of 16 psi. A 257 hour build up test was then run, recording a maximum bottom hole pressure of 1460 psi. The well was then fractured treated using 75,000 gallons of linear gel and 98,000 pounds of 20/40 Brady sand and 17,000 pounds of 20/40 resin coated sand. The frac load was recovered and the Mesa Verde was flow tested flow tested at 800 MCFD/1 BWPD. The well is currently shut-in awaiting final production equipment and regulatory approvals

(6) **Estimated bottomhole pressure for each artificially lifted zone. A current (within 30 days) measured bottom hole pressure for each zone capable of flowing.**

Mesa Verde completion: 1460 psi **(attachment IV)**

Gallup-Dakota completion: $800^{+/-}$ psi **(attachment V)**

The Mesa Verde P_{BH} was obtained using a bottomhole pressure recording device. The Gallup-Dakota P_{BH} was derived using shut-in pressures from offset Gallup-Dakota completions.

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

The fluids have no abnormal components that would prohibit commingling, or promote the creation of emulsions or scale (see attached produced water analysis). The major components of the produced waters are sodium, chlorides and bicarbonates. Several offsets are commingled in the proposed zones and no production problems have occurred.

(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.**

Gallup-Dakota Production		Mesa Verde Production	
Oil, BOPD	2	Oil, BOPD	0
Gas, MCFD	44	Gas, MCFD	800
Water, BWPD	1	Water, BWPD	1

The combined production from the Gallup-Dakota, Mesa Verde formations will be approximately 844 MCFD/2 BOPD/2 BWPD. Prior to the workover, the Gallup-Dakota was produced using a rod pump. With the addition of the Mesa Verde production both completions should flow without aid of the downhole pump.

(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 formula.**

Monthly production from the West Lindrith Gallup-Dakota Oil Pool is proposed to be calculated using the following formula:

$Q_2=Q_1(1-D)^n$ MCFD **equation (I)**

Where: Q_2= future production rate MCFD
Q_1= current production rate MCFD
D = effective in %/yr, from decline curve
n = years into the future to Q_2 from Q_1

Oil and water production will be calculated using the existing GLR and GOR of the Dakota formation.

Any oil, gas and water production above what is calculated by equation (I) shall be attributed to the Blanco Mesa Verde Gas Pool.

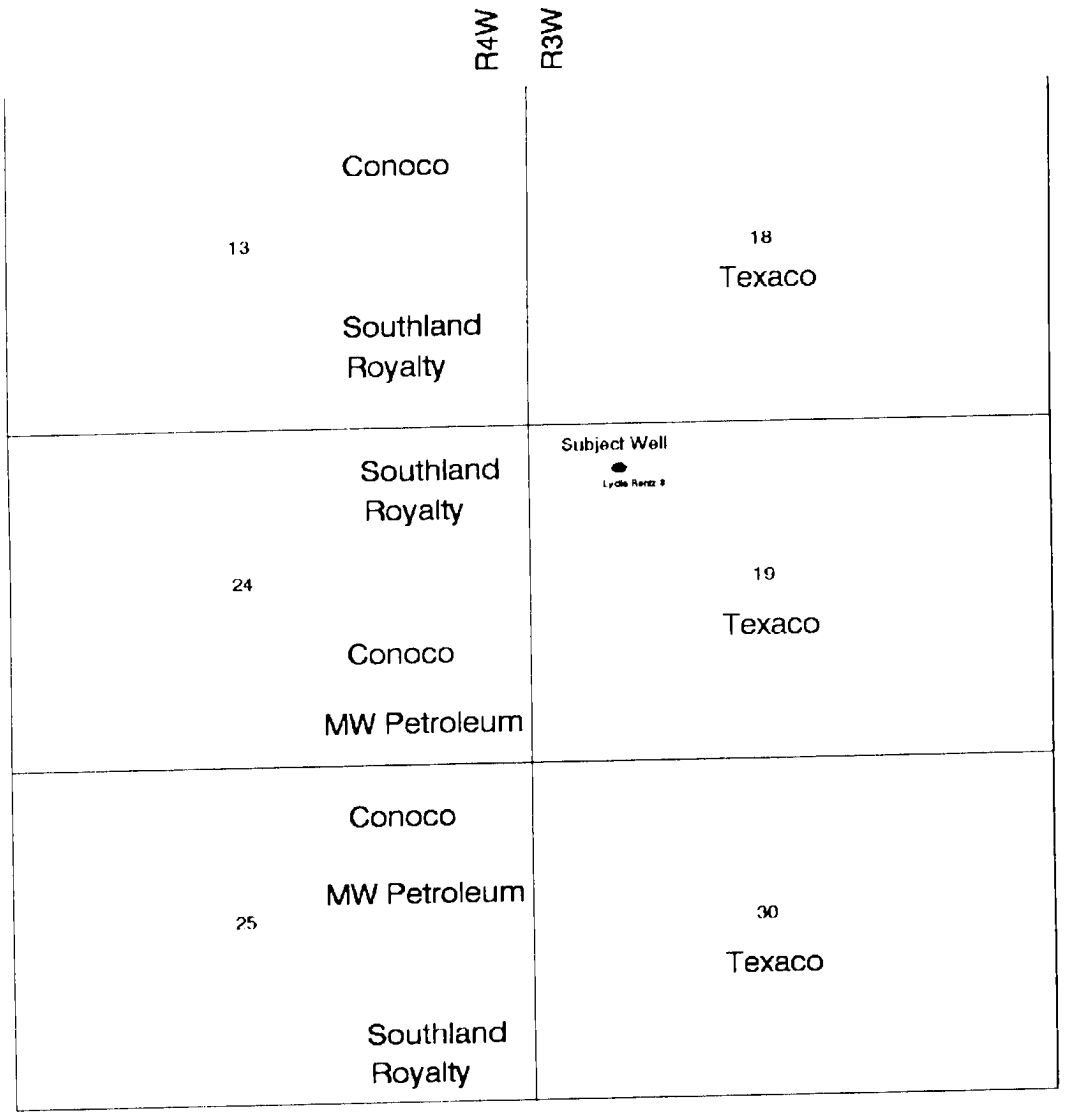
(10) **A statement that all offset operators and, in the case of a well on federal land, the United States Bureau of Land Management, have been notified in writing of the proposed commingling.**

All offset operators have been notified. Please find attached, signed return receipt cards from each operator.

Offset Operators

Lydia Rentz 8

Sec 19-T25N-R3W



Attachment II

Submit 2 copies to Appropriate District Office.
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
P.O. Drawer DD, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-116
Revised 1/1/89

GAS - OIL RATIO TEST

Operator: TEXACO E & P INC.
Pool: LINDRETH GALLUP DAKOTA WEST
County: RIO ARRIBA
Address: 3300 NORTH BUTLER FARMINGTON NM.87401
TYPE OF TEST - (X): Scheduled [X] Completion [ ] Special [ ]

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
JICARILLA "C"	1	I	22	25N	5W	5-16-92	F	3/4	46	0	24	0	0	0	13	-
JICARILLA "C "	26	I	21	25N	5W	5-28-92	F	-	43	3	24	0	44	2		
JICARILLA "C"	34	K	22	25N	5W	5-12-92	F	1"	47	0	24	.1	0	0	12	-
JICARILLA "C"	35	L	21	25N	5W	5-28-92	F	1"	147	7	24	2	45	6	60	10,000
L.L.McCONNELL	1	N	30	25N	5W	5-14-92	P	-	161	13	24	1	43	11	43	3,909
L.L.McCONNELL	13	N	31	25N	5W	5-14-92	P	-	159	9	24	.2	45	8	45	5,625
LYDIA RENTZ	7	C	20	25N	5W	5-14-92	F	1"	164	5	24	1	46	8	69	8,625
LYDIA RENTZ	8	C	19	25N	5W	5-14-92	P	_	160	7	24	1	45	2	44	22,000
C.W.ROBERTS	3A	L	18	25N	5W	4-28-92	F	1"	172	5	24	4	49	5	21	4.200
C.W.ROBERTS	5	F	17	25N	5W	5-4-92	F	1"	180	4	24	0	47	4	37	9,250
C.W.ROBERTS	6A	G	18	25N	5W	5-12-92	P	-	181	5	24	1	49	5	19	3,800

Instructions:

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 Division.

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.

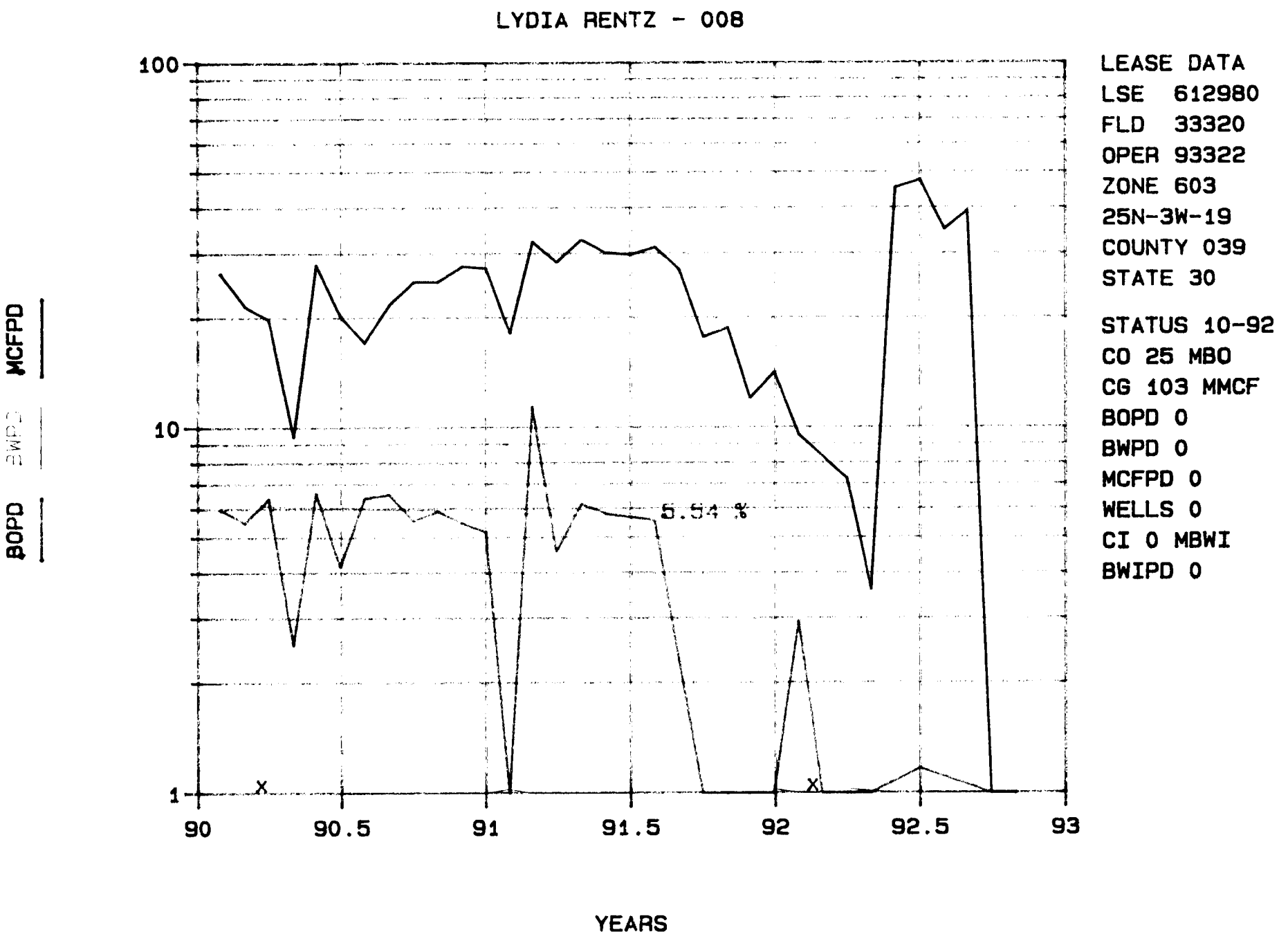
(See Rule 301, Rule 1116 & appropriate pool rules.)

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

Paul D. Berhost
Signature

PAUL D. BERHOST ENGINEER ASSISTANT
Printed name and title

6-9-92 (505) 326-2657
Date Telephone No.


LYDIA RENTZ - 008
100
10
1
90
90.5
91
91.5
92
92.5
93
BOPD
BWPD
MCFPD
5.54 %
YEARS
LEASE DATA
LSE 612980
FLD 33320
OPER 93322
ZONE 603
25N-3W-19
COUNTY 039
STATE 30
STATUS 10-92
CO 25 MBO
CG 103 MMCF
BOPD 0
BWPD 0
MCFPD 0
WELLS 0
CI 0 MBWI
BWIPD 0

PETRO LOG INC.

(806) 637-4993 P. O. Box 588 Brownfield, Texas 79316

TEXACO EXPLORATION & PRODUCTION, INC.

LYDIA RENTZ WELL NO. 8

PRESSURE BUILDUP TEST

TEST DEPTH 5806'

DATE RUN: 11-5-92

DATE PULLED: 11-16-92

BOTTOMHOLE PRESSURE:
WHEN FIRST REACHED BOTTOM - 976
WHEN FIRST SHUT-IN - 988

TIME SINCE SHUT-IN (HOURS)	PRESSURE	TIME SINCE SHUT-IN (HOURS)	PRESSURE
25.0	1384	150.0	1453
30.0	1389	160.0	1453
40.0	1413	170.0	1454
50.0	1423	180.0	1455
60.0	1428	190.0	1457
70.0	1433	200.0	1457
80.0	1440	210.0	1458
90.0	1441	220.0	1458
100.0	1443	230.0	1458
110.0	1446	240.0	1460
120.0	1448	250.0	1460
130.0	1451	257.0	1460
140.0	1449		

Attachment IV

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Operator TEXACO E & P INC. Lease C.W. ROBERTS Well No. 6

Location of Well: Unit: G Sec. 18 Twp. 25N Rge. 3W County RIO ARRIBA

	NAME OF RESERVOIR OR POOL	TYPE OF PROD. (OIL OR GAS)	METHOD OF PROD. (Flow or Art. Lift)	PROD. MEDIUM (Tbg. or Csg.)
Upper Completion	BLANCO MESAVERDE	GAS	FLOW	TBG.
Lower Completion	LINDRETH GALLUP DAKOTA	OIL	FLOW	TBG.

PRE-FLOW SHUT-IN PRESSURE DATA

Upper Completion	Hour, Date shut-in 5-17-92	Length of time shut-in	SI press. psig	Stablized (Yes or No)
Lower Completion	Hour, Date shut-in 5-17-92	Length of time shut-in	SI press. psig	Stablized (Yes or No)

FLOW TEST NO. 1

Commenced at (hour, date)* Zone producing (Upper or Lower) LOWER

TIME (hour,date)	LAPSED TIME SINCE*	PRESSURE		PROD. ZONE TEMP.	REMARKS
		Upper Completion	Lower completion		
4-20-92					'BOTH ZONES SHUTIN
4-21-92	24 HRS.	598	723		" " " "
4-22-92	48 HRS.	680	787		" " " "
4-23-92	72 HRS.	700	804		" " " "
4-24-92	96 HRS.	705	259		UPPER SHUTIN;LOWER FLOW 24 HRS.
4-25-92	120 HRS.	708	232		UPPER SHUTIN;LOWER FLOW 24 HRS.

Production rate during test

Oil _____ BOPD based on _____ Bbls. in _____ Hours _____ Grav. _____ GOR _____

Gas _____ MCFPD; Tested thru (Orifice or Meter): _____

MID-FLOW SHUT-IN PRESSURE DATA

Upper Completion	Hour, Date shut-in	Length of time shut-in	SI press. psig	Stablized (Yes or No)
Lower Completion	Hour, Date shut-in	Length of time shut-in	SI press. psig	Stablized (Yes or No)

CUM PRODUCTION AT TEST

31 MBO

282 MMCF