



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

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

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE 5/15/86

RE: Proposed MC _____
Proposed DHC ✓ _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated 5-13-86
for the Union Texas Pet. Corp. Operator Demand 3A P-8-31N-8W
Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve.

Yours truly,

J. W. [Signature]



Union Texas Petroleum

May 7, 1986

375 U.S. Highway 64
Farmington, New Mexico 87401
Telephone (505) 325-3587

Mr. Richard L. Stamets
N. M. Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501-2088

RECEIVED
MAY 13 1986
OIL CON. DIV.
DIST. 3

Re: Oxnard #3-A MV/DK 880' FEL, 1120' FSL
Section 8, T31N, R8W, San Juan County, NM

Dear Mr. Stamets:

Union Texas Petroleum is applying for an administrative downhole commingling order for the referenced well in the Basin Dakota and Blanco Mesaverde fields. The ownership of the zones to be commingled is common, with Union Texas Petroleum having a 75% working interest and Arco a 25% working interest. The two offset operators are Arco and Northwest Pipeline Corporation. The Bureau of Land Management and these offset operators will receive notification of this proposed downhole commingling.

The Dakota zone was perforated with a total of 19 holes from 7977' - 8077', and fraced with 50,000# sand in slick water. The Dakota has produced only 60 MMCF since its first delivery in November, 1981. The Mesaverde zone was perforated with a total of 31 holes from 5469'-5933', and fraced with 93,000# sand in slick water. The Mesaverde has produced 270 MMCF since its first delivery in September, 1981 and is presently capable of 321 MCF/D. The well was initially completed as a dual Mesaverde/Dakota in March, 1980.

A packer leakage test in November, 1985 indicated the two producing zones were communicated downhole. Due to the Dakota interval's poor production (average less than 10 MCF/D), we would propose plugging the Dakota and recompleting the well as a single Mesaverde rather than making the possibly expensive repairs necessary to eliminate the communication and continue producing as a dual. All of the nearby Dakota wells are also poor producers. Therefore, downhole commingling would now be the most efficient method of producing the subject well. The proposed commingling will result in the recovery of additional hydrocarbons from the Basin Dakota interval, thereby preventing waste, and will not violate correlative rights.

Mr. Richard L. Stamets
May 7, 1986
Page 2

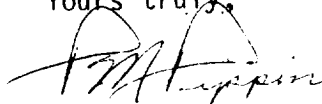
The reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed downhole commingling. The fluids from each zone are compatible and no precipitates will be formed to cause damage to either reservoir. The Dakota side of this well does not produce water, nor do the other Dakota wells nearby. The Mesaverde in this well makes very little water. The daily production will not exceed the limit of Rule 303c, Section 1a, Part 1. Neither zone has produced any oil or condensate. The bottom hole pressure for the Dakota is 1157 psi. The bottom hole pressure for the Mesaverde is 595 psi. These bottom hole pressures were calculated using the shut-in pressures from the formations' last deliverability test and the Rawlins and Schellhardt method for determining bottom hole pressures in gas well.

The District Office in Aztec will be notified any time the commingled well is shut in for seven (7) consecutive days.

To allocate the commingled production to each of the zones, Union Texas Petroleum will consult with the District Supervisor of the Aztec District Office of the Division to determine an allocation formula for each of the production zones.

Included with this letter is a plat showing ownership of offsetting leases, letters to the offset operators and the BLM, wellbore diagram, data sheet, production curves, Mesaverde water analysis, and the most current deliverability tests.

Yours truly,



P. M. Pippin
Senior Production Engineer

PMP:lmg

cc: Frank Chaves
OCD - Aztec Office

UNION TEXAS PETROLEUM CO

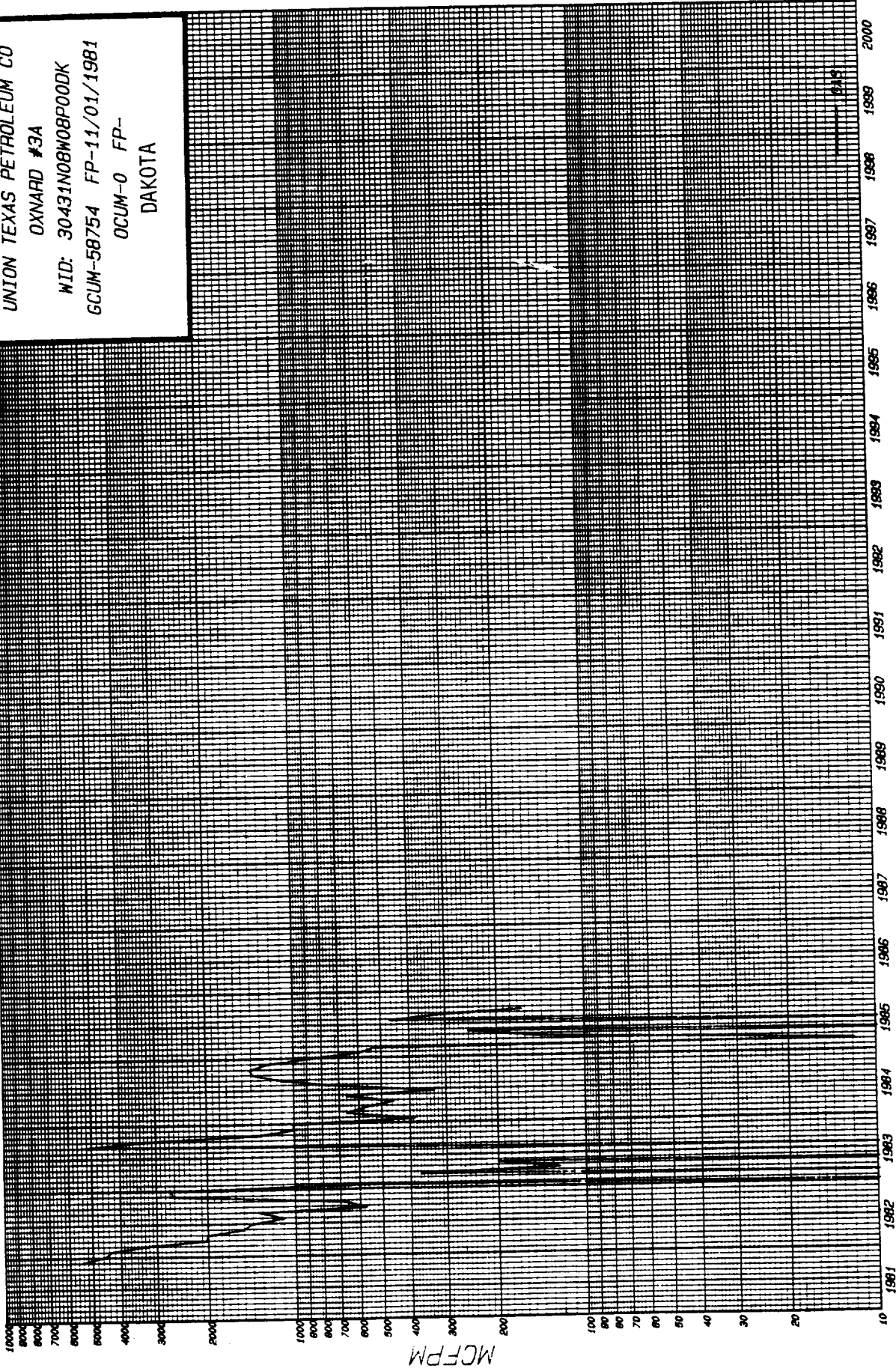
OXNARD #3A

WID: 30431N08W08P00DK

GCUM-58754 FP-11/01/1981

OCUM-0 FP-

DAKOTA



UNION TEXAS PETROLEUM CO

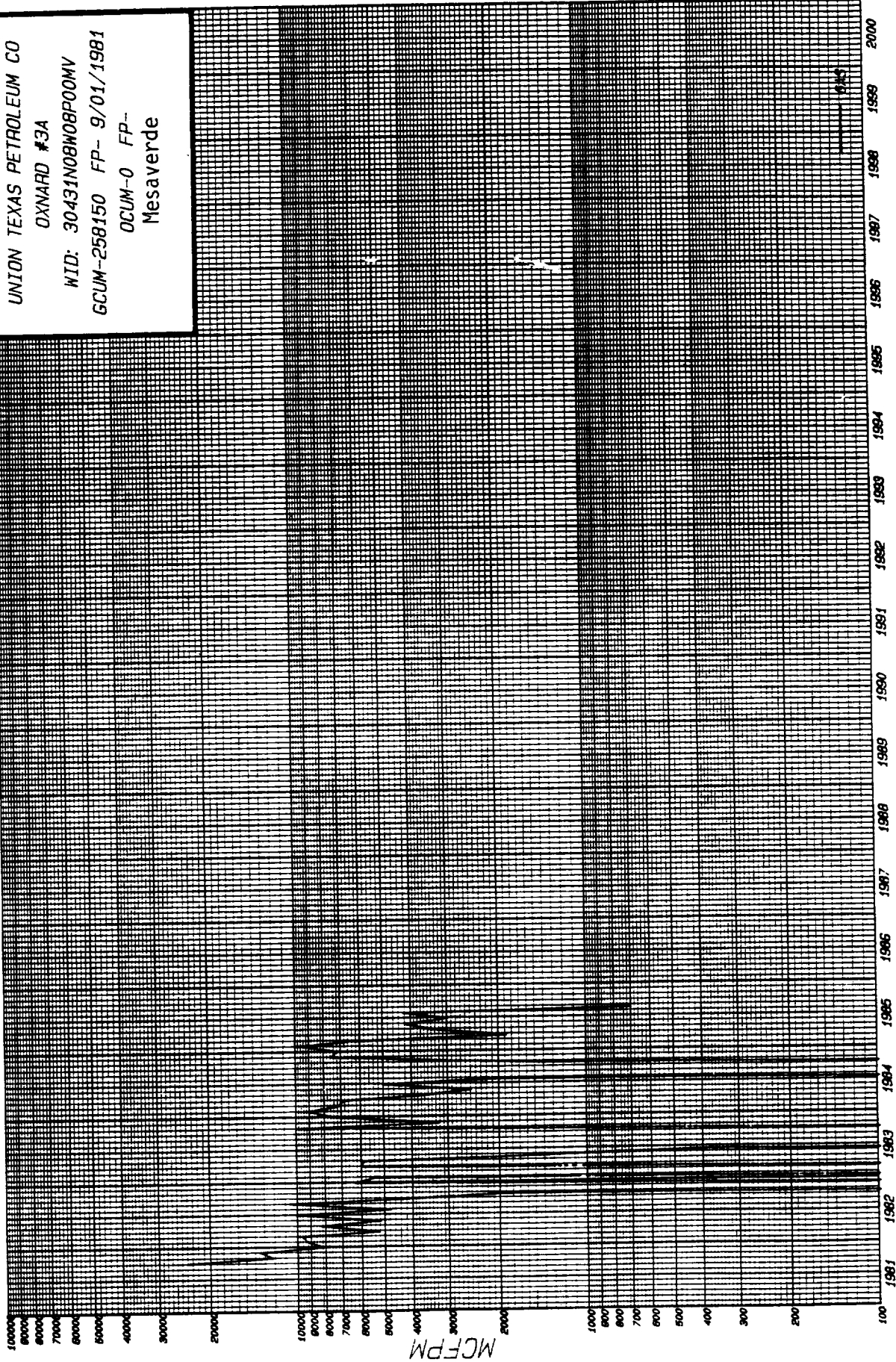
OXNARD #3A

WID: 30431N08W08P00MV

GCUM-258150 FP- 9/01/1981

OCUM-0 FP-

Mesaverde



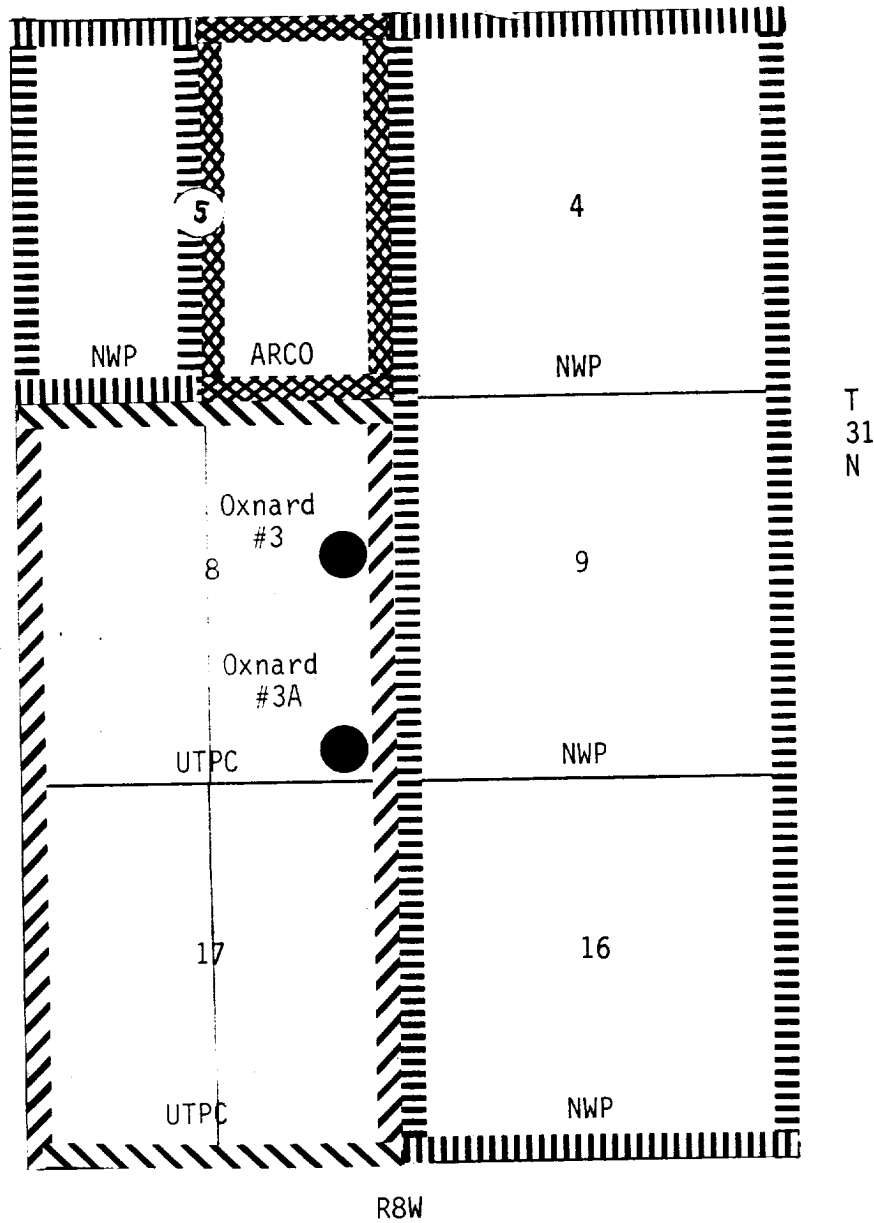
PRODUCTION YEAR

UNION TEXAS PETROLEUM CORPORATION

Oxnard #3A

Mesaverde-Dakota Commingle Application

San Juan County
New Mexico



Operator

Northwest Pipeline Corp.
Union Texas Petroleum
Arco



WORKOVER DATA SHEETWELL NAME Oxnard #3ADATE 12/2/85LOCATION 880' FEL; 1120' FSL Sec. 8, T31N, R8W
San Juan County, NMDATUM KB (13' above G.L.)ELEVATION 6546' G.L.TOTAL DEPTH 8122'FIELD FORMATION Basin Dakota
Blanco MesaverdeUNICON W.I. 75%
NR = 62.625%COMPLETED
3/28/80INITIAL POTENTIALMV: AOF=3177 MCF/D; SICP=1274 psi
DK: AOF=1990 MCF/D; SITP=2205 psiPLUG BACK TOTAL DEPTH
8109'CASING RECORD

	<u>CASING SIZE</u>	<u>WT. & GRADE</u>	<u>DEPTH SET</u>	<u>CEMENT</u>	<u>TOP CEMENT</u>
13-3/4" hole	10-3/4"	32.75# H-40	324'	275 sx	circ.
9-7/8" hole	7-5/8"	26.4# K-55	3740'	350 sx	2100' (survey)
6-3/4" hole	5-1/2"	15.5# K-55	3568'-8122'	500 sx	circ.

TUBING RECORD

2-1/16"	3.25# IJ	7931'
	Baker Model R double grip pkr @ 7924'	
	2 Baker Blast Joints 5509'-5549'	
	4 Baker Blast Joints 5743'-5823'	
2-1/16"	3.25# IJ	5873'

WELL HEADLOGGING RECORD

Density & Induction Logs

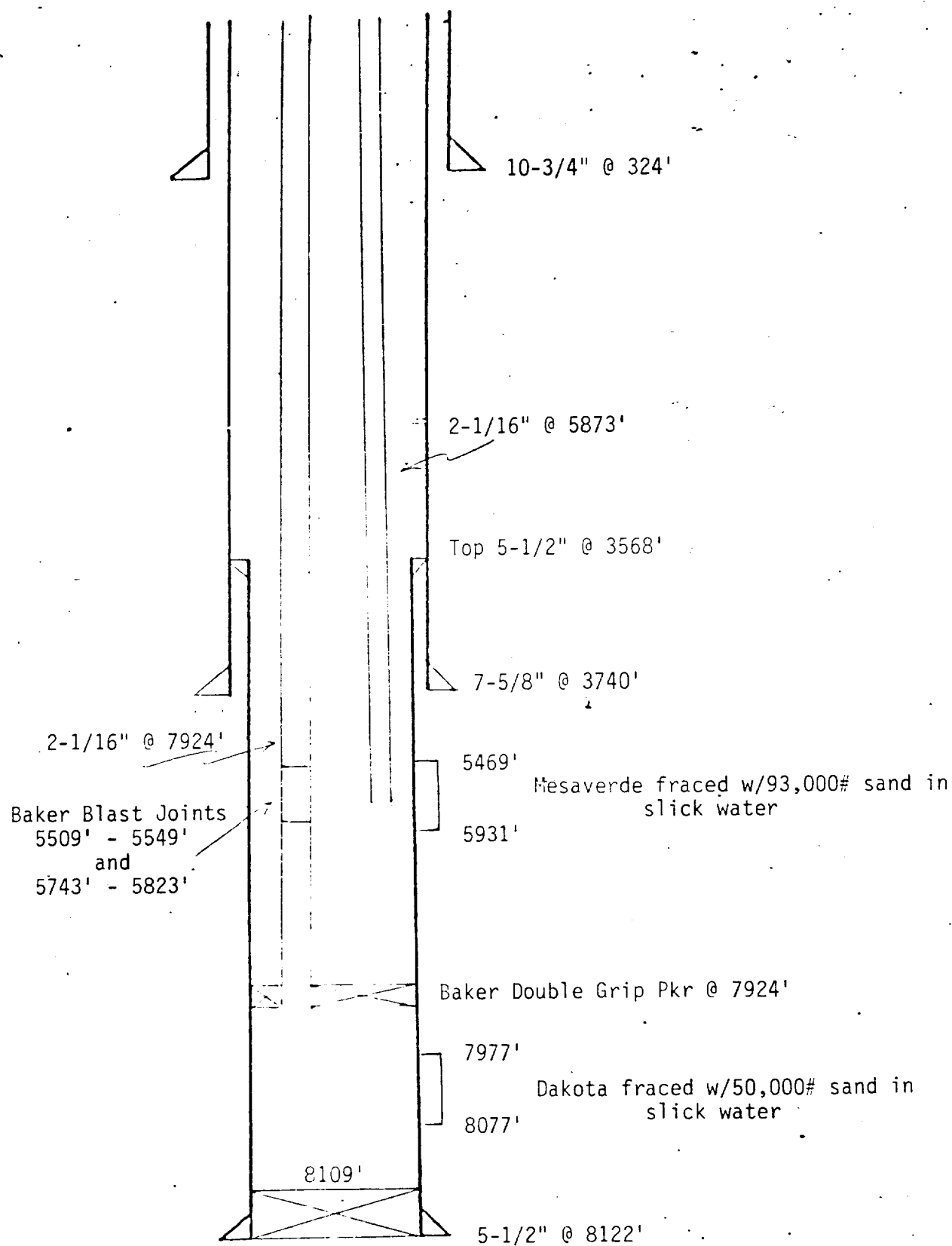
STIMULATIONS

Perf DK 7977', 78', 79', 8001', 4', 7', 10', 13', 16', 19', 8053', 56', 59', 62', 65', 68', 71', 74', 77' w/1-0.42" hole/ft. Total 19 holes. Fraced w/50,000# 20/40 sand in slick water. Perf MV 5469', 72', 74', 5521', 23', 26', 30', 32', 36', 39', 58', 69', 5610', 12', 65', 67', 5756', 61', 69', 81', 87', 91', 99', 5804', 12', 18', 23', 64', 66', 5931', 33' w/1-0.42" shot/ft. Total 31 holes. Fraced w/ 93,000# 20/40 sand in slick water.

WORKOVER HISTORY

NONE

PRODUCTION HISTORYDK = 991 BTU
MV = 1011 BTU
1st Delivery: 9/81
Cumulative MV: 258 MMCF
Cumulative DK: 59 MMCF



NEW MEXICO OIL CONSERVATION COMMISSION
WELL DELIVERABILITY TEST REPORT FOR 19 83

Form C122-A
 Revised 1-1-86

POOL NAME <u>basin</u>	POOL SLOPE n = <u>0.75</u>	FORMATION <u>Sakota</u>	COUNTY <u>San Juan</u>
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COMPANY <u>Union Texas Petroleum Corp.</u>			WELL NAME AND NUMBER <u>Ornard No. 3-A</u>		
UNIT LETTER <u>P</u>	SECTION <u>8</u>	TOWNSHIP <u>31N</u>	RANGE <u>8W</u>	PURCHASING PIPELINE <u>Southern Union Gathering</u>	
CASING O.D. - INCHES <u>7.625</u> <u>5.500</u>	CASING I.D. - INCHES <u>6.969</u> <u>4.950</u>	SET AT DEPTH - FEET <u>3740</u> <u>3568-8122</u>	TUBING O.D. - INCHES <u>2.0625</u>	TUBING I.D. - INCHES <u>1.750</u>	TOP - TUBING PERD. - FEET <u>7921</u>
GAS PAY ZONE FROM <u>7977</u> TO <u>8077</u>		WELL PRODUCING THRU CASING TUBING <u>XX</u>		GAS GRAVITY <u>.601</u>	GRAVITY X LENGTH <u>4761</u>
DATE OF FLOW TEST FROM <u>4/8/83</u> TO <u>4/16/83</u>			DATE SHUT-IN PRESSURE MEASURED <u>6/15/83</u>		

PRESSURE DATA - ALL PRESSURES IN PSIA

(a) Flowing Casing Pressure (DWt)	(b) Flowing Tubing Pressure (DWt)	(c) Flowing Meter Pressure (DWt)	(d) Flow Chart Static Reading	(e) Meter Error (Item c - Item d)	(f) Friction Loss (a - c) or (b - c)	(g) Average Meter Pressure (Integr.)
—	<u>289</u>	<u>285</u>	<u>289</u>	<u>-4</u>	<u>+4</u>	<u>305</u>
(h) Corrected Meter Pressure (g + e)	(i) Avg. Wellhead Press. $P_i = (h + f)$	(j) Shut-in Casing Pressure (DWt)	(k) Shut-in Tubing Pressure (DWt)	(l) $P_c =$ higher value of (j) or (k)	(m) Del. Pressure $P_d = \frac{50}{100} P_c$	(n) Separator or Dehydrator Pr. (DWt) for critical flow only
<u>301</u>	<u>305</u>	—	<u>972</u>	<u>972</u>	<u>486</u>	—

FLOW RATE CORRECTION (METER ERROR)

Integrated Volume - MCF/D	Quotient of $\frac{\text{Item c}}{\text{Item d}}$	$\sqrt{\frac{\text{Item c}}{\text{Item d}}}$	Corrected Volume
<u>3</u>	<u>.9862</u>	<u>.9931</u>	Q = <u>3</u> MCF/D

WORKING PRESSURE CALCULATION

$(1 - e^{-x})$	$(P_c Q_m)^2 (1000)$	$R^2 = (1 - e^{-x}) (P_c Q_m)^2 (1000)$	P_i^2	$P_w^2 = P_i^2 + R^2$	$P_w = \sqrt{P_w^2}$
<u>.293</u>		<u>FLN</u>	<u>93.025</u>		<u>Pt. 305</u>

DELIVERABILITY CALCULATION

$$D = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = \underline{3} \left[\frac{(708.588)^2}{(851.759)^2} \right]^n = \frac{(.8319)^n}{.8710} = \underline{3} \text{ MCF/D}$$

REMARKS:

Annual test first schedule

SUMMARY

Item b 301 Psia
 P_c 972 Psia
 Q 3 MCF/D
 P_w 305 Psia
 P_d 486 Psia
 D 3 MCF/D

Company Union Texas Petroleum Corp.
 By Barbara Norman
 Title Production Secretary
 Witnessed By _____
 Company _____

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122-A
Revised 10-1-78

WELL DELIVERABILITY TEST REPORT FOR 19 86

WELL NAME <u>Blanco</u>	WELL DEPTH <u>80.75</u>	FORMATION <u>Mesaville</u>	COUNTY <u>San Juan</u>
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COMPANY <u>Union Texas Petroleum Corp.</u>			WELL NAME AND NUMBER <u>Oxnard 710.3-A</u>		
WELL LETTER <u>P</u>	SECTION <u>8</u>	TOWNSHIP <u>31N</u>	RANGE <u>8W</u>	SURVEYING FIRM <u>L. H. Gardner Co.</u>	
STANDING S.P. - INCHES <u>7.625</u>	STANDING P.P. - INCHES <u>4.950</u>	SET AT G.P.P. - FEET <u>3740</u>	TESTED S.P. - INCHES <u>2.0625</u>	TESTED P.P. - INCHES <u>1.750</u>	TEST - TO G.P.P. - FEET <u>5863</u>
FROM <u>5469</u> TO <u>5933</u>		WELL PRODUCTION TIME <u>XX</u>	GAS GRAVITY <u>.597</u>		GRAVITY & LENGTH <u>3500</u>
DATE OF FLOW TEST FROM <u>3/18/86</u> TO <u>3/25/86</u>			DATE SHUT-IN PRESSURE MEASURED <u>4/1/86</u>		

PRESSURE DATA - ALL PRESSURES IN PSIA

(a) Flowing Casing Pressure (DWP)	(b) Flowing Tubing Pressure (DWP)	(c) Flowing Meter Pressure (DWP)	(d) Flow Chart Static Reading	(e) Meter Error (Sum e - Sum d)	(f) Friction Loss (a-e) or (b-e)	(g) Average Meter Pressure (Integ.)
414	408	405	405	0	+ 3	333
(h) Corrected Meter Pressure (g + e)	(i) Avg. Wellhead Press. $P_1 = (b + f)$	(j) Shut-in Casing Pressure (DWP)	(k) Shut-in Tubing Pressure (DWP)	(l) $P_2 =$ higher value of (j) or (k)	(m) Del. Pressure $P_d =$ <u>70</u> <small>100</small>	(n) Separator or Dehydrator Pn. (DWP) for critical flow only
333	336	527	485	527	369	—

FLOW RATE CORRECTION (METER ERROR)

Integrated Volume - MCF/D	Quantity of $\frac{\text{Item e}}{\text{Item d}}$	$\sqrt{\frac{\text{Item e}}{\text{Item d}}}$	Corrected Volume
273	1.000	1.000	Q = 273 MCF/D

WORKING PRESSURE CALCULATION

$(1 - e^{-x})$	$(P_1 Q_w)^2 (1000)$	$\frac{x^2}{(1 - e^{-x}) (P_1 Q_w)^2 (1000)}$	P_1^2	$P_w^2 = P_1^2 + x^2$	$P_w = \sqrt{P_w^2}$
.225	13,063	2939	112,896	115,835	340

DELIVERABILITY CALCULATION

$$Q = \left[\frac{P_1^2 - P_w^2}{P_1^2 - P_w^2} \right]^{.875} = 273 \left[\frac{(141,568)^{.875} - (340)^{.875}}{(161,894)^{.875} - (340)^{.875}} \right] = 247 \text{ MCF/D}$$

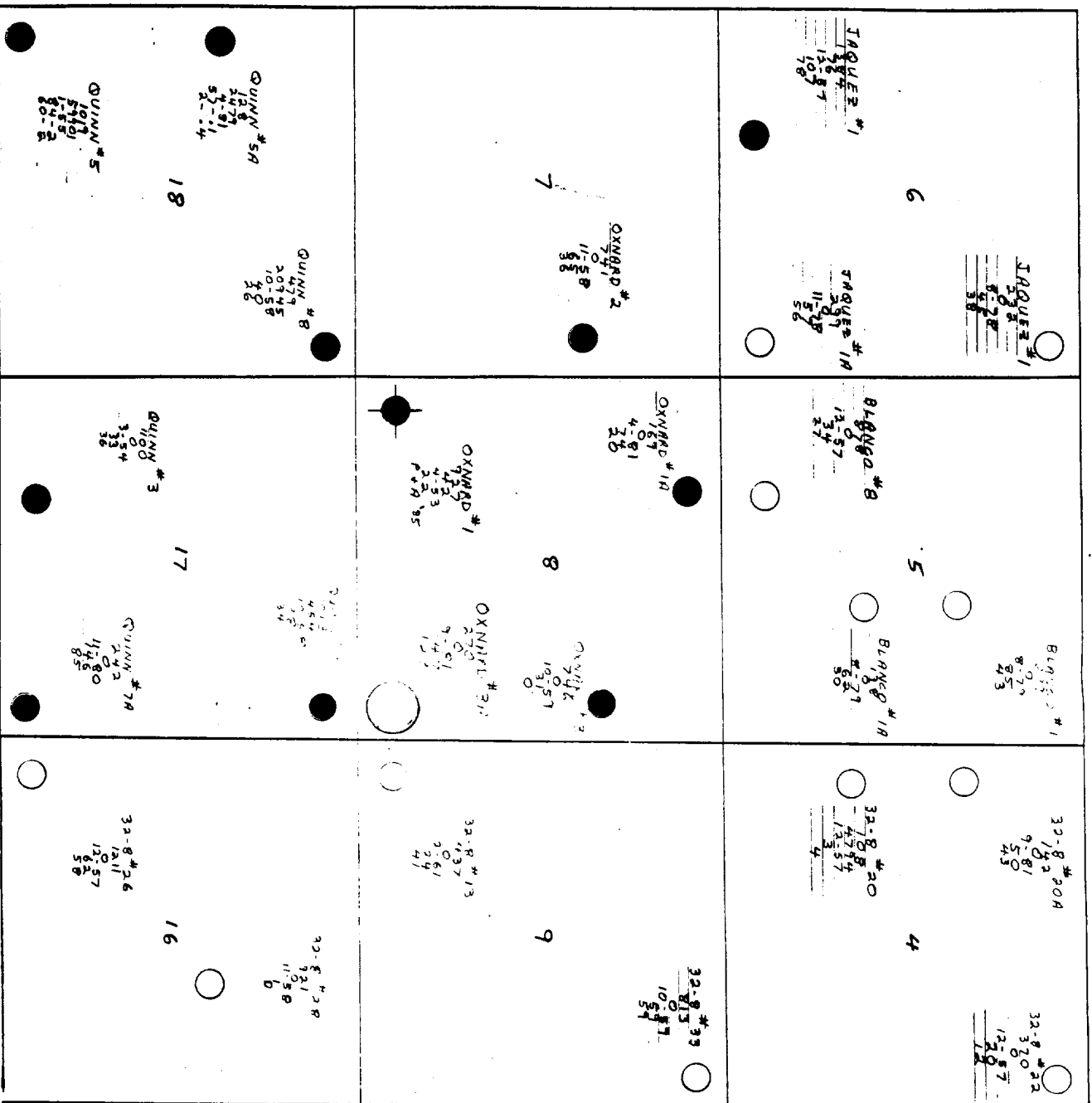
REMARKS:

SUMMARY

Item h 333 Press
 P₁ 527 Press
 Q 273 MCF/D
 P_w 340 Press
 P_d 369 Press
 D 247 MCF/D

Company Union Texas Petroleum Corp.
 By Barbara Norman 4/18/86
 Title Production Technician
 Witnessed By _____
 Company _____

MESAVERDE WELLS NEAR OXNARD 3H
SAN JUAN COUNTY, N.M.



WELL NAME
CUM. GAS (MCF)
CUM. OIL (B.O.)
1ST DEL. DATE
AVE. 1784 PROD. METH-PROD
AVE. 1785 PROD. METH-PROD

T
31
N

UTPC OPERATED
OUTSIDE OPERATED
PLUGGED
SUBJECT WELL

1784
5/6/96

LAKEOTA WELLS NEAR OXNARD 3A
SAN JUAN COUNTY, N. M.

6	5	4
7	8	9
18	17	16

WELL NAME
CUM. GAS (MMCF)
CUM. OIL (BBL)
1ST DEL. DATE
GUE-1281 PROD. METHOD
DVE-1285 PROD. METHOD

T
31
N

SUBJECT WELL
UTPC OPERATED

PAIR
5/6/86

K 31V



Union Texas Petroleum

May 7, 1986

375 U.S. Highway 64
Farmington, New Mexico 87401
Telephone (505) 325-3587

U.S. Department of the Interior
Minerals Management Service
P. O. Drawer 600
Farmington, NM 87499

Gentlemen:

Union Texas Petroleum is in the process of applying for a downhole commingling order for their Oxnard #3A well located 880' FEL, 1120' FSL, Sec. 8, T31N, R8W, N.M.P.M., San Juan County, NM, in the Basin Dakota and Blanco Mesaverde.

The purpose of this letter is to notify you of such action, as our records indicate that you are the owner and operator of acreage which adjoins the area in which the downhole commingling is requested. If you have no objections to the proposed commingling order, we would appreciate your signing the attached copy of this letter and returning same to this office.

Your prompt attention to this matter would be appreciated.

Yours truly,

P. M. Pippin
Senior Production Engineer

PMP:lmg

The above downhole commingling request
is hereby approved:

Date: _____



Union Texas Petroleum

May 7, 1986

375 U.S. Highway 64
Farmington, New Mexico 87401
Telephone (505) 325-3587

Northwest Pipeline Corporation
P. O. Box 90
Farmington, New Mexico 87499

Gentlemen:

Union Texas Petroleum is in the process of applying for a downhole commingling order for their Oxnard #3A well located 880' FEL, 1120' FSL, Sec. 8, T31N, R8W, N.M.P.M., San Juan County, NM, in the Basin Dakota and Blanco Mesaverde.

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Yours truly,

P. M. Pippin
Senior Production Engineer

PMP:lmg

The above downhole commingling request
is hereby approved:

Date: _____



Union Texas Petroleum

May 7, 1986

375 U.S. Highway 64
Farmington, New Mexico 87401
Telephone (505) 325 3587

Arco Oil & Gas Company
1816 East Mojave
Farmington, New Mexico 87401

Gentlemen:

Union Texas Petroleum is in the process of applying for a downhole commingling order for their Oxnard #3A well located 880' FEL, 1120' FSL, Sec. 8, T31N, R8W, N.M.P.M., San Juan County, NM, in the Basin Dakota and Blanco Mesaverde.

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Yours truly,

P. M. Pippin
Senior Production Engineer

PMP:lmg

The above downhole commingling request
is hereby approved:

Date: _____

API WATER ANALYSIS REPORT FORM

Company Union Texas Petroleum		Sample No. 1		Date Sampled 05/01/86	
Field Blanco		Legal Description P 8 31 8		County or Parish San Juan	
Lease or Unit Oxnard		Well 3A		Depth	Formation Mesaverde
Type of Water (Produced, Supply, etc.) Produced		Sampling Point Separation Unit			Water, B/D Trace
Sampled By					

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	2217	96.8
Calcium, Ca	119	5.9
Magnesium, Mg	121	9.9
Barium, Ba		
Potassium, K	20	0.5

ANIONS

Chloride, Cl	3908	110.2
Sulfate, SO ₄	28	0.6
Carbonate, CO ₃		
Bicarbonate, HCO ₃	137	2.3
Hydroxide, OH-	0	0

Total Dissolved Solids (calc.)

6550

Iron, Fe (total)

FE ++=10/Fe +++=0

Sulfide, as H₂S

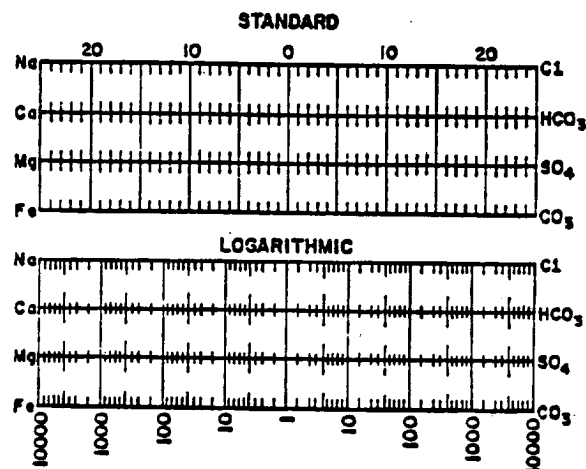
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REMARKS & RECOMMENDATIONS:

OTHER PROPERTIES

pH	5.84
Specific Gravity, 60/60 F.	1.004
Resistivity (ohm-meters) 63 F.	1.000
Total hardness	800

WATER PATTERNS — me/l



PRODUCTION ANALYSTS
 Analytical Services
 P. O. Box 10112
 Farmington, NM 87497

Analyst Clay Terry