

DHC 8/11/97  
RECEIVED  
JUL 21 1997  
OIL CONSERVATION DIVISION

# Chateau Oil and Gas, Inc.

July 17, 1997

William J. LeMay  
New Mexico Oil Conservation Division  
2040 S. Pacheco  
Santa Fe, New Mexico 87505-6429

Re: **Application for Administrative Approval of Downhole Commingle  
for Chateau Oil and Gas, Inc. Duke No. 1,  
Basin Dakota/Blanco Mesaverde Dual  
1850' FNL & 1180' FEL  
Sec 13, T31N, R13W, , San Juan County, New Mexico**

1666

Dear Mr. LeMay:

Chateau Oil and Gas, Inc. hereby requests administrative approval to downhole commingle the Basin Dakota and Blanco Mesaverde formations within the above referenced well. The gas streams are presently designed to produce as a dual completion. Enclosed is the completed Form C-107-A along with the various supporting attachments.

We would like to allocate 81.7% of the gas and 61.1% of the oil to the Dakota formation; 18.3% of the gas and 38.9% of the oil to the Mesaverde formation, based on the cumulative production history. From December 1962 to May 1997 the Dakota has produced 1,655,306 MCF of gas and 12,750 barrels of oil. The Mesaverde has produced 370,577 MCF of gas and 8,111 barrels of oil.

The ownership, working interest, royalty and overriding royalty are the same for both zones and the percentages of ownership are also the same. Notice of this application has been sent to all offsetting operators.

The tubing strings for both zones will be pulled. The intent will be to pull only the seal assembly out of the packer. The 1 1/2" tubing string for the Dakota will be tested and run into the well, stringing it through the packer. A plunger lift will be installed in order to move the associated liquids so that the well will continue to flow.

Current pressure information has been taken on the Dakota formation and is shown on Form C-107-A. However, current measured pressure could not be obtained on the Mesaverde formation. Therefore information was obtained on the Williams No. 1 well located in Section 24, T31N, R13W which is the adjacent section to the south and approximately one mile from the subject well. It is anticipated that this pressure is representative of the pressure that would be observed in the Duke No. 1 well.

In addition, copies of the water analysis information are provided on the Candado 1E which is from water samples on the same producing zones. This information has previously been used in determining fluid compatibility on prior commingling applications which have been approved by the Division.

If you have any questions, please contact either me or Dana Dutcher at 214-891-3350.

Sincerely,



John V. Peters  
Vice President - Operations

cc: N.M. Oil Conservation Division, Aztec  
BLM, Farmington

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-107-A  
New 3-12-96

DISTRICT II  
811 South First St., Artesia, NM 88210-2835

OIL CONSERVATION DIVISION

2040 S. Pacheco  
Santa Fe, New Mexico 87505-6429

APPROVAL PROCESS:

Administrative  Hearing

DISTRICT III  
1000 Rio Brazos Rd, Aztec, NM 87410-1693

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE

YES  NO

Operator Chateau Oil and Gas, Inc. Address 5950 Berkshire Lane, Suite 275, Dallas, Tx 75225

Lease Duke Well No. 1 Unit Ltr. - Sec - Twp - Rge H 13-31N-13W County San Juan

OGRID NO. 159819 Property Code 010244 API NO. 30-045-10762 Spacing Unit Lease Types: (check 1 or more)  
Federal  State  Land/In Fee

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Blanco Mesaverde 72319	-	Basin Dakota 71599
2. Top and Bottom of Pay Section (Perforations)	4514' - 4708'	-	6650' - 6764'
3. Type of production (Oil or Gas)	Gas	-	Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing	-	Flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated Or Measured Original	a. (Current) <u>6-17-97</u> <u>301</u> psig offset Williams 1	a.	a. 524 psig 7-11-97
	b. (Original) not measured	b.	b. not measured
6. Oil Gravity (°API) or Gas BTU Content	BTU 1176		BTU 1196
7. Producing or Shut-In?	Shut-In		Producing
Production Marginal? (yes or no)	Yes		Yes
* If Shut-In, give date and oil/gas/water rates of last production  Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data  * If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: <u>6-16-94</u> Rates: <u>17 McFPD</u>	Date: - Rates: -	Date: - Rates: -
	Date: - Rates: -	Date: - Rates: -	Date: <u>5-30-97</u> Rates: <u>110 McFPD</u>
8. Fixed Percentage Allocation Formula - % for each zone	Oil: <u>38.9%</u> Gas: <u>18.3%</u>	Oil: - % Gas: - %	Oil: <u>61.1%</u> Gas: <u>81.7%</u>

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones?  Yes  No  
If not, have all working, overriding, and royalty interests been notified by certified mail?  Yes  No  
Have all offset operators been given written notice of the proposed downhole commingling?  Yes  No

11. Will cross-flow occur?  Yes  No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable.  Yes  No (If No, attach explanation)

12. Are all produced fluids from all commingled zones compatible with each other?  Yes  No

13. Will the value of production be decreased by commingling?  Yes  No (If Yes, attach explanation)

14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application.  Yes  No

15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S) \_\_\_\_\_

16. ATTACHMENTS:

- \* C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- \* Production curve for each zone for at least one year. (If not available, attach explanation.)
- \* For zones with no production history, estimated production rates and supporting data.
- \* Data to support allocation method or formula.
- \* Notification list of all offset operators.
- \* Notification list of working, overriding, and royalty interests for uncommon interest cases.
- \* Any additional statements, data, or documents required to support commingling.

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

SIGNATURE  TITLE Vice President DATE 7/17/97

TYPE OR PRINT NAME John V. Peters TELEPHONE NO. (214) 891-3350

Chateau Oil & Gas Inc.

Duke No. 1

Sec 13 T31N R13W

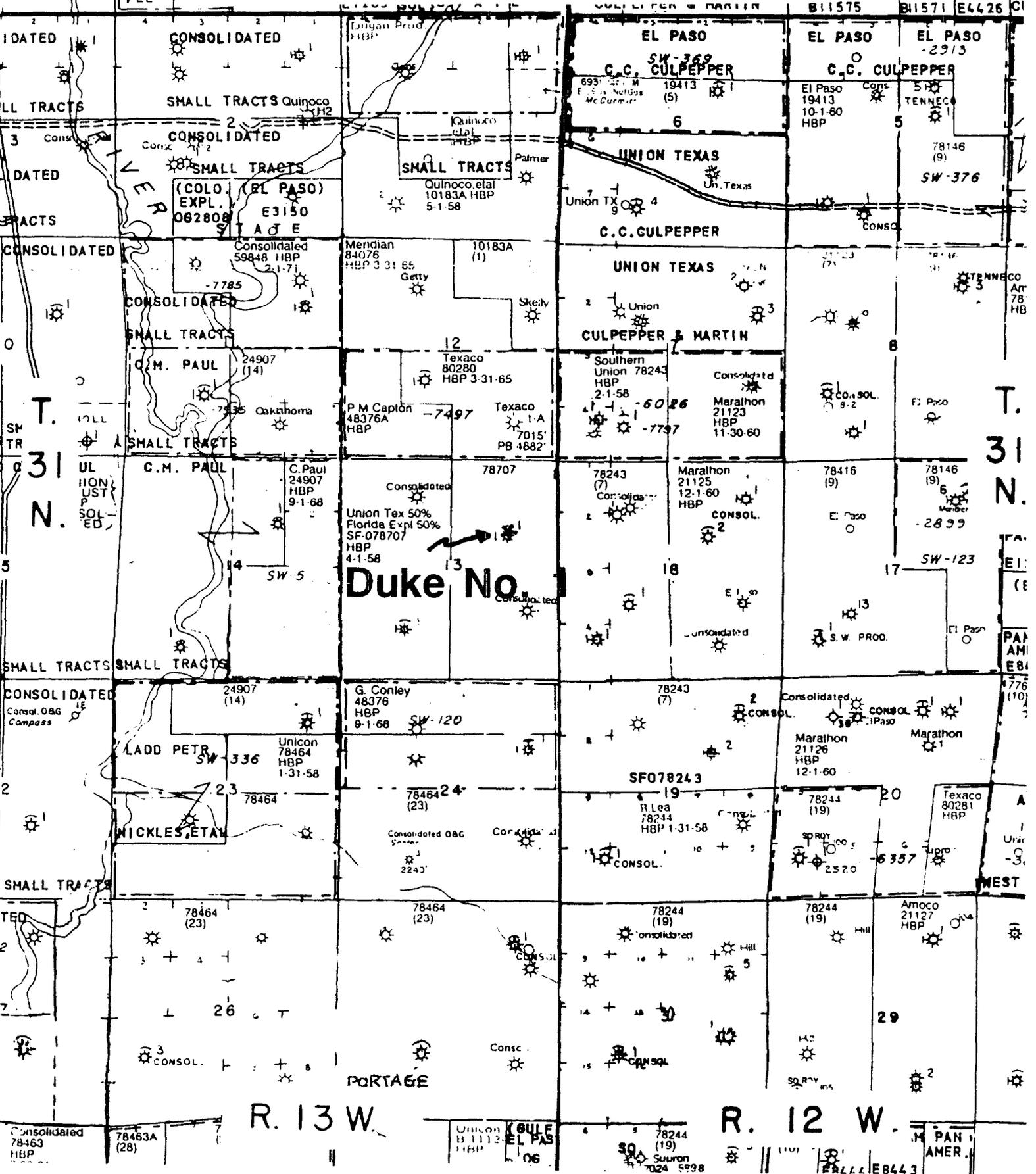
San Juan County, New Mexico

CONSOLIDATED  
477

CONSOLIDATED  
(11.5.82)

Consolidated  
79007A  
HBP  
5-1-58

(EL PASO) (LOP-EZ)  
B11371 B11571  
(AZ-TEG)  
2266  
064898  
ZTEC (PAN AM) (PAN AM)  
B11575 B11571 E4426



Duke No. 1

R. 13 W.

R. 12 W.

T. 31 N.

EL PASO

PAN AM

WEST

Amoco

Amoco

Amoco

Amoco

Amoco

Amoco

Amoco

NEW MEXICO DEPARTMENT OF CONSERVATION COMMUNITY DEVELOPMENT  
Well Location and Acreage Dedication Plat

Section A.

Date October 12, 1962

Operator CONSOLIDATED OIL AND GAS, INC. Lease Deche 1-13  
Well No. \_\_\_\_\_ Unit Letter H Section 13 Township 31 NORTH Range 13 WEST NMPM  
Located 1350 Feet From the NORTH Line 1180 Feet From the EAST Line  
County SAN JUAN G. L. Elevation 5815.0 Dedicated Acreage 320 Acres  
Name of Producing Formation Dakota & Mesaverde Pool Basin Dakota & Blanco Mesaverde

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below?  
Yes  No \_\_\_\_\_
2. If the answer to question one is "no", have the interests of all the owners been consolidated by a community agreement or otherwise? Yes \_\_\_\_\_ No \_\_\_\_\_ If answer is "yes", Type of Consolidation \_\_\_\_\_
3. If the answer to question two is "no", list all the owners and their respective interests below:

Owner	Land Description

RECEIVE

OCT 17 1962

U. S. GEOLOGICAL SURVEY  
FARMINGTON, NEW MEXICO

Section B.

Note: All distances must be from outer boundaries of section.

This is to certify that the information in Section A above is true and complete to the best of my knowledge and belief.

Consolidated Oil & Gas, Inc.

(Operator)

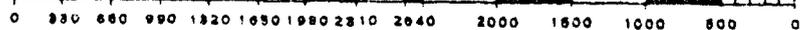
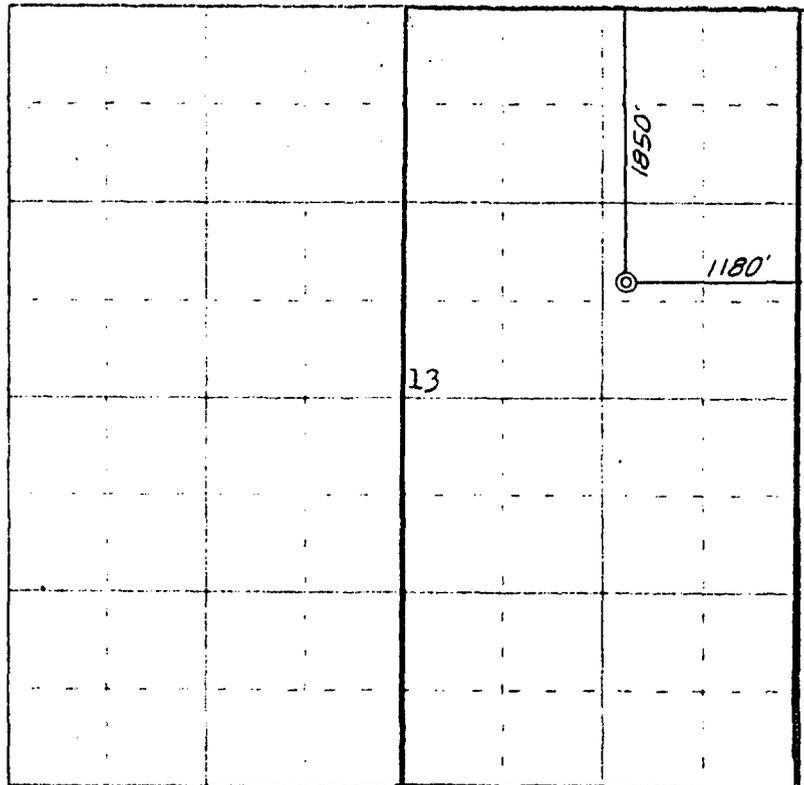
[Signature]  
(Representative)

Writer Building

(Address)

4150 E. Mexico Avenue

Denver 22, Colorado



Scale 4 inches equal 1 mile

This is to certify that the above plat was prepared from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.

Date Surveyed 3 October 1962

[Signature]  
Registered Professional Engineer and Land Surveyor  
James P. Leese, N. Mex. Reg. No. 1263

(Seal)

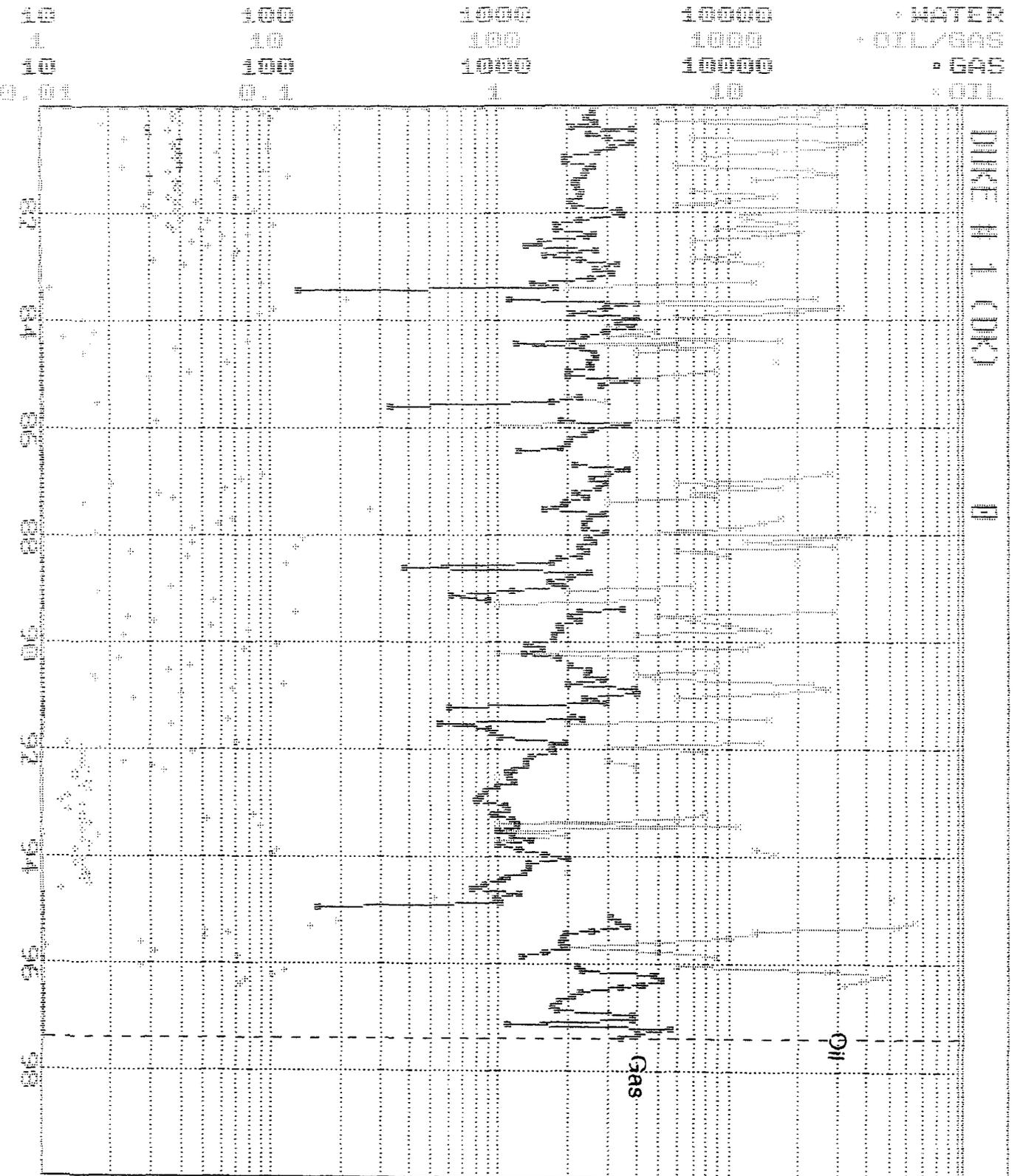
Farmington, New Mexico

**Duke # 1**  
**Fixed Percentage Allocation Formula**

Cumulative Production as of May 1997

	<u>Oil (Barrels)</u>	<u>%</u>	<u>Gas (MCF)</u>	<u>%</u>
<b><u>Dakota Formation</u></b>	12,750	61.1%	1,655,306	81.7%
<b><u>Mesaverde Formation</u></b>	8,111	38.9%	370,577	18.3%
<b><u>TOTAL</u></b>	20,861	100.0%	2,025,883	100.0%

# Duke #1 Dakota



PROP 348

- OIL BBL/M
- GAS McF/M
- OIL/GAS
- WATER BBL/M



Major = GAS

# Duke #1 Mesaverde

DUKE #1 (MUD) (PSID) 0 3

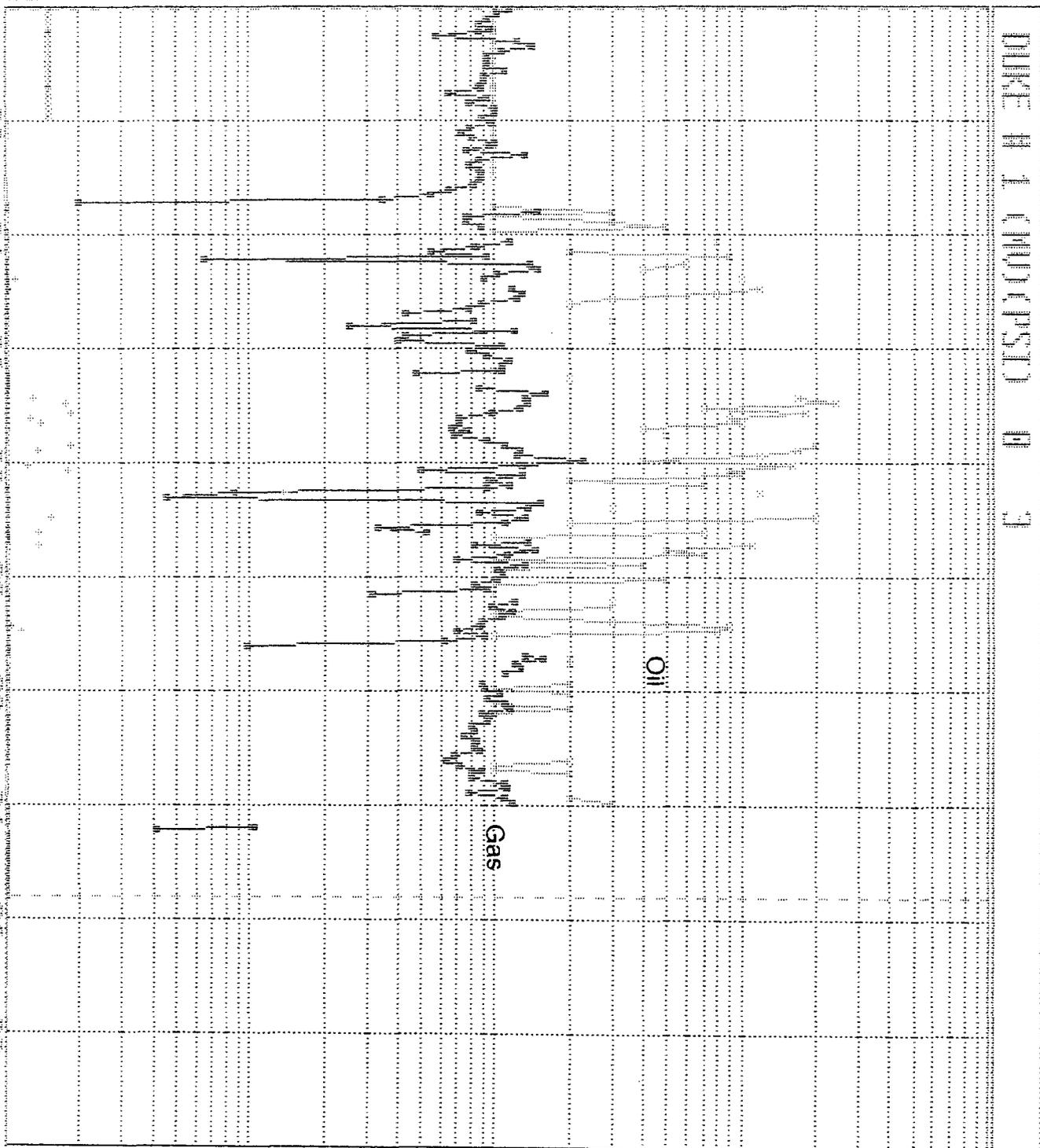
• WATER  
• OIL/GAS  
• GAS  
• OIL

10000  
10000  
10000

1000  
1000  
1000

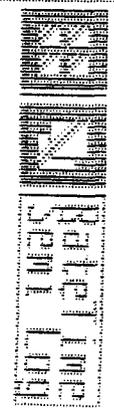
100  
100  
100

0.01  
0.01  
0.01



PROP 349

- OIL MM/M
- GAS MCF/M
- OIL/GAS
- WATER MM/M



Major = GAS

**TEFTELLER INC**

**Pressure Gradient Report**

COMP : CHATEAU OIL & GAS      WELL : DUKE # 1      T : 0.0  
 FIELD :      RES : DAKOTA      DATUM : 6570.0  
 DATE : 07/11/1997      STATUS : S.I.      HRS : 0.0  
 TBG : 1-1/2      DPTH :      END : 6585      PKR :      S N :  
 CSG :      DPTH :      PERFS :      GRAD : 0.215000      T D :

Depth (ft)	Pressure (psig)	Delta P (psi)	Gradient (psi/ft)
0	364.0		
1000	376.0	12.0	0.0120
2000	389.0	13.0	0.0130
3000	401.0	12.0	0.0120
4170	414.0	13.0	0.0111
5170	426.0	12.0	0.0120
6170	440.0	14.0	0.0140
6370	481.0	41.0	0.2050
6570	524.0	43.0	0.2150
6570	524.0	0.0	

REMARKS : CASING PRESSURE : PAKER  
 TOP OF OIL @ 6170

TUBING PRESSURE : 265

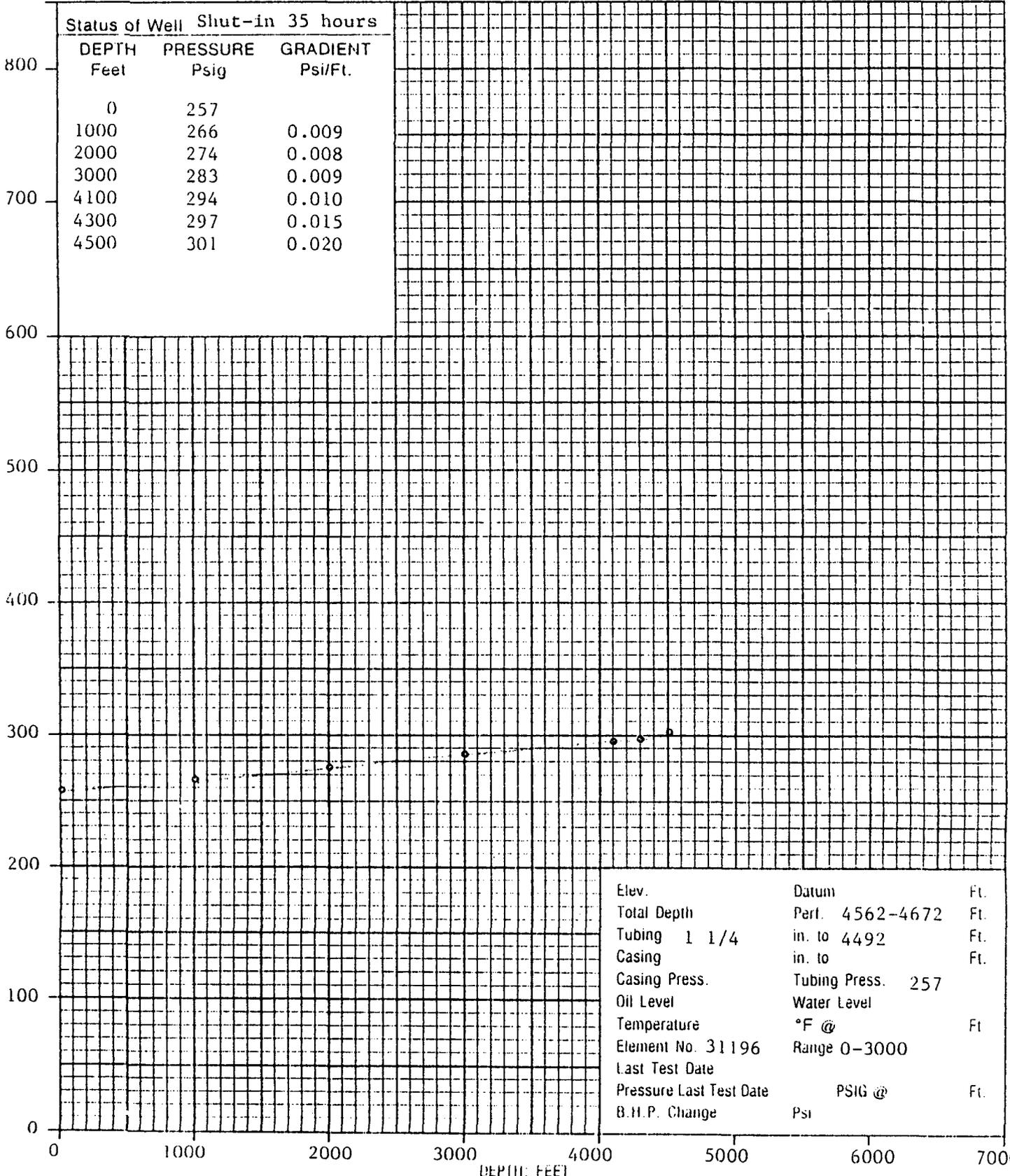


Company Chateau Oil & Gas, Inc. Lease Williams Well No. 1(NV)  
 Field \_\_\_\_\_ County San Juan State New Mexico  
 Formation Mesa Verde Test Date June 17, 1997

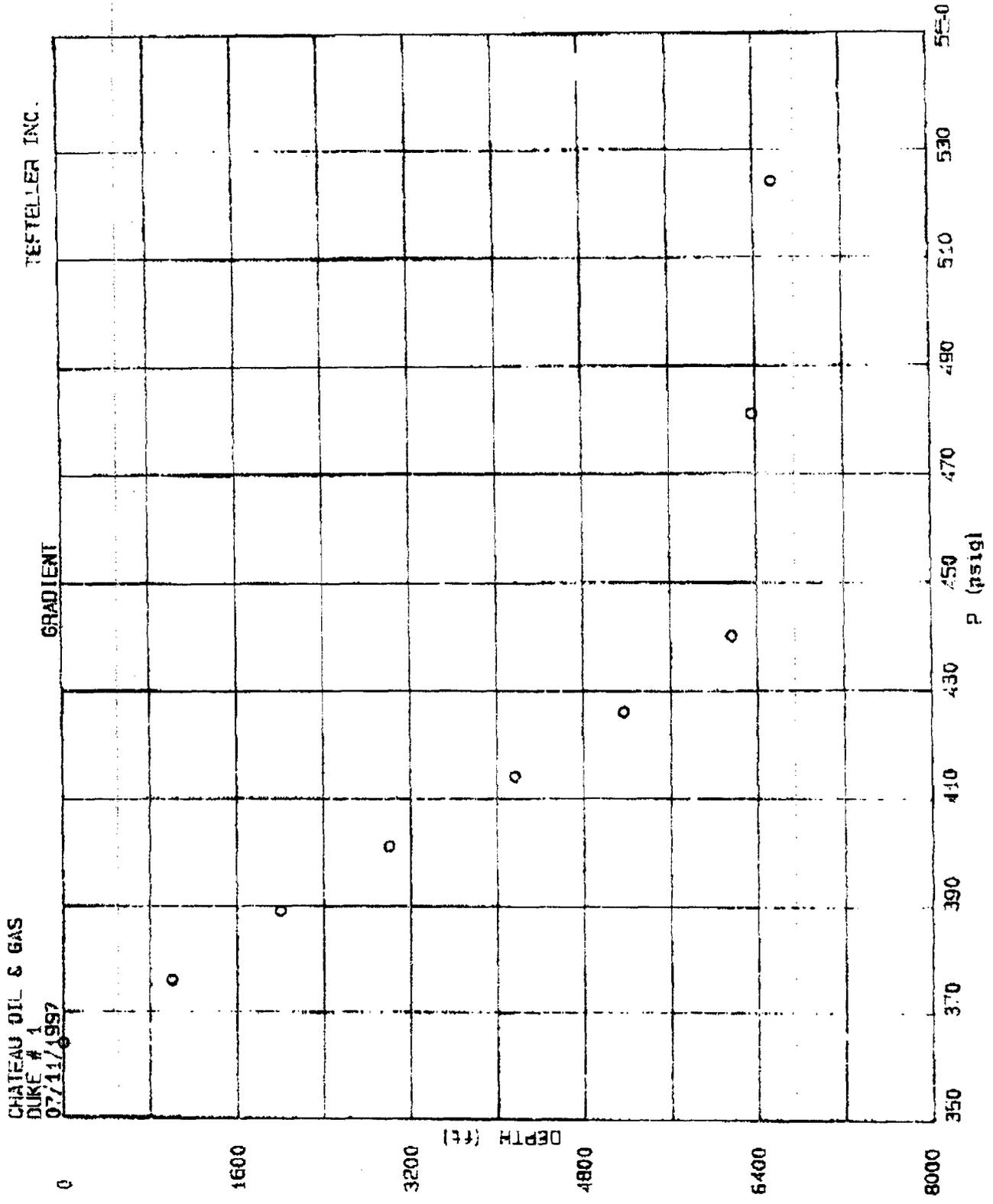
Status of Well Shut-in 35 hours

DEPTH Feet	PRESSURE Psig	GRADIENT Psi/Ft.
0	257	
1000	266	0.009
2000	274	0.008
3000	283	0.009
4100	294	0.010
4300	297	0.015
4500	301	0.020

PRESSURE POUNDS PER SQUARE INCH GAUGE



Elev.	Datum	Ft.
Total Depth	Perf. 4562-4672	Ft.
Tubing 1 1/4	in. to 4492	Ft.
Casing	in. to	Ft.
Casing Press.	Tubing Press. 257	
Oil Level	Water Level	
Temperature	°F @	Ft.
Element No. 31196	Range 0-3000	
Last Test Date		
Pressure Last Test Date	PSIG @	Ft.
B.H.P. Change	Psi	



U N I C H E M I N T E R N A T I O N A L

1215 Basin Road

P.O. Box 421

FARMINGTON, N.M. 87401

COMPANY: COLUMBUS ENERGY

DATE: 4-9-86

FIELD, LEASE AND WELL: CANDADO 1E DAKOTA

SAMPLING POINT: WELLHEAD

DATE SAMPLED: 3-27-86

SPECIFIC GRAVITY: 1.009

TOTAL DISSOLVED SOLIDS: 15,092

PH = 7.95

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	1.6	32.0
MAGNESIUM	(MG)+2	2.4	29.1
SODIUM	(NA), CALC.	245.0	5632.0

ANIONS			
BICARBONATE	(C)3)-1	21.0	1281.0
CARBONATE	(CO3)-2		
HYDROXIDE	(OH)-1		
SULFATE	(SO4)-2	0	0
CHLORIDES	(CL)-1	228.0	8100.0

DISSOLVED GASES			
CARBON DIOXIDE	(CO2)		
HYDROGEN SULFIDE	(H2S)		
OXYGEN	(O2)		
IRON	(FE)		35.1
BARIUM	(BA)+2	0.25	17.3
MANGANESE	(MN)		
IONIC STRENGTH = 0.255			

		TEMP.	
		86° F 30° C	120° F 48.8° C
CARBONATE INDEX		0.310	0.711
CALCIUM CARBONATE SCALING		LIKELY	LIKELY
SULFATE INDEX		-45.0	-46.0
CALCIUM SULFATE SCALING		UNLIKELY	UNLIKELY

U N I C H E M I N T E R N A T I O N A L

1215 Basin Road

P.O. Box 421

FARMINGTON, N.M. 87401

COMPANY: COLUMBUS ENERGY

DATE: 4-9-86

FIELD, LEASE AND WELL: 50% CANDADO 1E MESA VERDE/50% CANDADO 1E DAKOTA

SAMPLING POINT: WELLHEAD

DATE SAMPLED: 3-27-86

SPECIFIC GRAVITY: 1.009

TOTAL DISSOLVED SOLIDS: 14,764

PH = 7.495

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	3.6	72.1
MAGNESIUM	(MG)+2	3.4	41.4
SODIUM	(NA), CALC.	233.0	5367.0
ANIONS			
BICARBONATE	(C)3)-1	17.2	1049.0
CARBONATE	(CO3)-2		
HYDROXIDE	(OH)-1		
SULFATE	(SO4)-2	19.2	925.0
CHLORIDES	(CL)-1	204.0	7300.0

DISSOLVED GASES

CARBON DIOXIDE	(CO2)		
HYDROGEN SULFIDE	(H2S)		
OXYGEN	(O2)		
IRON	(FE)		48.0
BARIUM	(BA)+2	0.12	8.7
MANGANESE	(MN)		
IONIC STRENGTH 0.258			

SCALING INDEX

	TEMP. 86° F 30° C	120° F 48.8° C
CARBONATE INDEX	0.115	0.517
CALCIUM CARBONATE SCALING	LIKELY	LIKELY
SULFATE INDEX	-36.0	-36.0
CALCIUM SULFATE SCALING	UNLIKELY	UNLIKELY

U N I C H E M I N T E R N A T I O N A L

1215 Basin Road

P.O. Box 421

FARMINGTON, N.M. 87401

COMPANY: COLUMBUS ENERGY

DATE: 4-9-86

FIELD, LEASE AND WELL: CANDADO IE MESA VERDE

SAMPLING POINT: WELLHEAD

DATE SAMPLED: 3-27-86

SPECIFIC GRAVITY: 1.009

TOTAL DISSOLVED SOLIDS: 14,335

PH = 7.04

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	5.6	112.0
MAGNESIUM	(MG)+2	4.4	53.4
SODIUM	(NA), CALC.	221.0	5101.0

ANIONS			
BICARBONATE	(C)3)-1	13.4	817.0
CARBONATE	(CO3)-2		
HYDROXIDE	(OH)-1		
SULFATE	(SO4)-2	38.5	1850.0
CHLORIDES	(CL)-1	180.0	6400.0

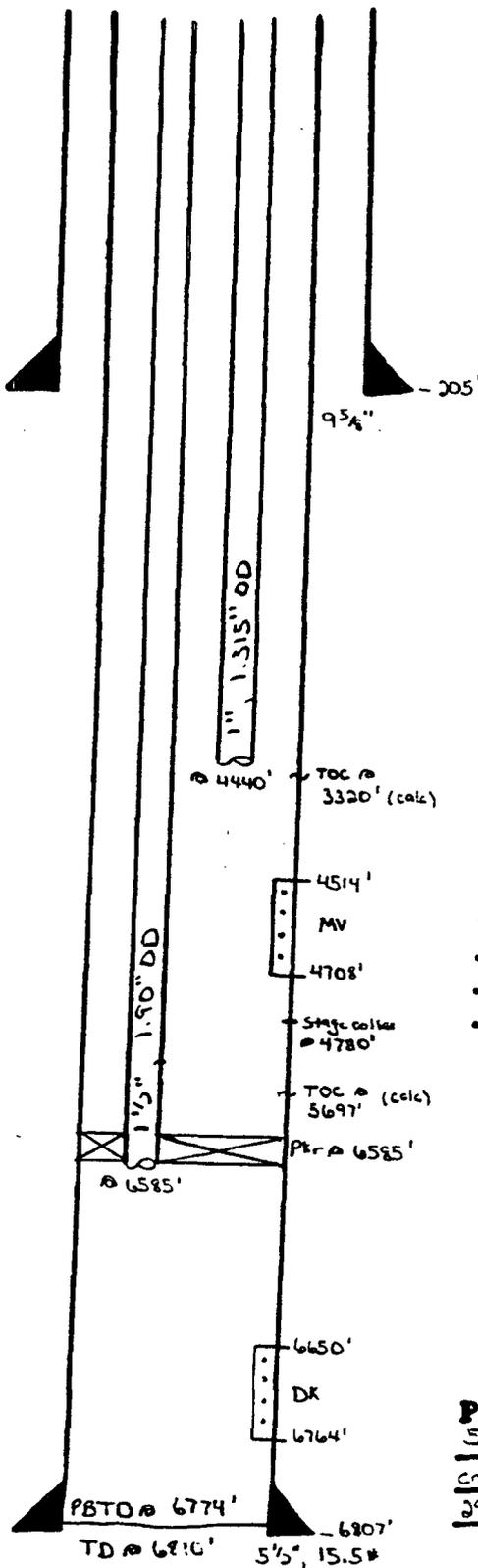
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)		
HYDROGEN SULFIDE	(H2S)		
OXYGEN	(O2)		
IRON	(FE)		61.0
BARIUM	(BA)+2		0.2
MANGANESE	(MN)		

IONIC STRENGTH = 0.26			
SCALING INDEX			
CARBONATE INDEX		TEMP 86 °F 30 °C	120 °F 48.8 °C
CALCIUM CARBONATE SCALING		-0.25	0.142
		UNLIKELY	LIKELY
SULFATE INDEX		-27.0	-28.0
CALCIUM SULFATE SCALING		UNLIKELY	UNLIKELY

### WELLDOME DIAGRAM

WELL NAME: Duke No. 1-13  
 LOCATION: 1850' FNL & 1180' FEL  
 COUNTY, STATE: San Juan, NM  
 GL Elevation: 5815'  
 KB Elevation: 5827'  
 TD: 6810'  
 PBTD: 6774'

BY: MCD  
 DATE: 6-24-91



**Surface Csg:**  
 9 5/8" set @ 205'  
 cemented w/ 150 sx res 290 CaCl<sub>2</sub>

**Tubing:**  
 1 1/2" 1.90" OD landed @ 6585'  
 1" 1.315" OD landed @ 4440'

**Cement top(s):**  
 5 1/2" shoe to 6585' (calc)  
 stage @ 4780' to 3320' (calc)

**Packer:**  
 5 1/2" Baker model "D" set @ 6585'

**Perfs (Formation):**  
 MV 4514' - 4708' ~ 174'  
 DK 6650' - 6764' ~ 114'

**Production Csg:**  
 5 1/2" 15.5# set @ 6907'  
 cemented w/ 222 sx thru shoe +  
 292 sx thru stage collar @ 4780'

**Duke 1 Offset Operators**

P-R-O Management  
9400 N. Central Exprwy #1313  
LB 158  
Dallas, Tx 75231

Sec 11-31N-13W

Dugan Production Corp  
P.O. Box 420  
Farmington, NM 87499-0420

Sec 12-31N-13W

Sec 14-31N-13W

Universal Resources  
2601 N.W. Exprwy, Suite 700E  
Oklahoma City, Ok 73112

Sec 23-31N-13W

Chateau Oil & Gas, Inc.  
5950 Berkshire Lane  
Suite 275  
Dallas, Tx 75225

Sec 24-31N-13W

Sec 19-31N-12W

Sec 18-31N-12W

Sec 7-31N-12W

# *Chateau Oil and Gas, Inc.*

July 16, 1997

P-R-O Management  
9400 N. Central Expressway #1313  
LB 158  
Dallas, Tx 75231

**Re: Waiver for administrative Approval of Downhole commingling for  
Chateau Oil and Gas, Inc. Duke 1, Basin Dakota & Blanco  
Mesaverde Dual, 1850' FNL & 1180' FEL, Sec 13, T31N, R13W  
San Juan County, New Mexico**

Gentlemen:

Chateau Oil and Gas, Inc. is applying to the New Mexico Oil Conservation Division, as outlined in the NMOCD Rule 303C, for administrative approval to commingle production from the Dakota and Mesaverde zones in the subject well. These zones have already been approved by the Commission for downhole commingling in the area. We are therefore notifying your office of our intent to commingle the same zones in the referenced well, and would like you to sign and return one copy of the Waiver of Objection in each of the self addressed envelopes.

Please mail the waivers to William J. LeMay, New Mexico Oil Conservation Division, 2040 S. Pacheco, Santa Fe, New Mexico 87505-6249 and John V. Peters, Chateau Oil and Gas, Inc., 5950 Berkshire Lane, Suite 275, Dallas, Texas 75225.

If you have any questions concerning this request, please contact John V. Peters at 214-891-3350.

Sincerely,

CHATEAU OIL AND GAS, INC.

John V. Peters  
Vice President - Operations

JVP/jw  
Enclosures

cc: N.M. Conservation Division, Santa Fe  
N.M. Conservation Division, Aztec  
BLM, Farmington

# *Chateau Oil and Gas, Inc.*

July 16, 1997

Dugan Production Corp.  
P.O. Box 420  
Farmington, NM 87499-0420

**Re: Waiver for administrative Approval of Downhole commingling for  
Chateau Oil and Gas, Inc. Duke 1, Basin Dakota & Blanco  
Mesaverde Dual, 1850' FNL & 1180' FEL, Sec 13, T31N, R13W  
San Juan County, New Mexico**

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Sincerely,

CHATEAU OIL AND GAS, INC.

John V. Peters  
Vice President - Operations

JVP/jw  
Enclosures

cc: N.M. Conservation Division, Santa Fe  
N.M. Conservation Division, Aztec  
BLM, Farmington

# *Chateau Oil and Gas, Inc.*

July 16, 1997

Universal Resources  
2601 N. W. Expwy, Suite 700E  
Oklahoma City, OK 73112

**Re: Waiver for administrative Approval of Downhole commingling for  
Chateau Oil and Gas, Inc. Duke 1, Basin Dakota & Blanco  
Mesaverde Dual, 1850' FNL & 1180' FEL, Sec 13, T31N, R13W  
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CHATEAU OIL AND GAS, INC.

John V. Peters  
Vice President - Operations

JVP/jw  
Enclosures

cc: N.M. Conservation Division, Santa Fe  
N.M. Conservation Division, Aztec  
BLM, Farmington