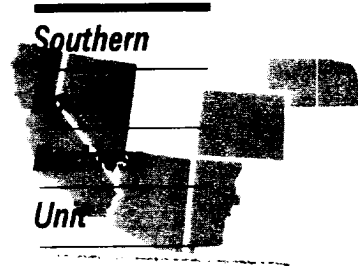


## **Ernie Busch**

---

**From:** Ernie Busch  
**To:** Ben Stone  
**Subject:** AMOCO BRUINGTON LS#3(DHC)  
**Date:** Thursday, March 21, 1996 1: 8PM  
**Priority:** High

6-06-30N-11W  
RECOMMEND: APPROVAL



February 26, 1996

Mr. William J. LeMay, Director  
New Mexico Oil Conservation Division  
2040 S. Pacheco Street  
P. O. Box 6429  
Santa Fe, NM 87505

**RECEIVED**  
MAR 4 1996  
**OIL CON. DIV.**  
**DIST. 3**

**Application for Exception to Rule 303-C  
Downhole Commingling**

**Bruington LS #3 Well**

**1625' FSL & 800' FWL, Unit G Section 6-T30N-R11W**

**Blanco Mesaverde (Pool IDN 72319) and Aztec Pictured Cliffs (Pool IDN 71280) Pools  
San Juan County, New Mexico**

Amoco Production Company hereby requests administrative approval to downhole commingle production from the Blanco Mesaverde and Aztec Pictured Cliffs Pools in the Bruington LS #3 well referenced above. The Bruington LS #3 is currently a dual completion in the Mesaverde and Pictured Cliffs formations with the Pictured Cliffs temporarily abandoned. We plan to complete the well with both the Mesaverde and Pictured Cliffs formations being downhole commingled in the wellbore thereby returning the Pictured Cliffs to production. The two zones are expected to produce at a total commingled rate of about 34 MCFD with less than 1BCPD. The ownership (WI, RI, ORI) of these pools is not common in this wellbore. Downhole commingling will offer an economical method of production while protecting against reservoir damage, waste of reserves and violation of correlative rights. Offset operators to this well and all interest owners involved in the two formations will receive a copy of this application by certified mail.

The allocation method that we plan to use for this commingled well is as follows. Both formations historically produced at stabilized rates until the Pictured Cliffs became temporarily abandoned due to low productivity. We recommend that the Mesaverde and Pictured Cliffs formations gas and condensate be allocated based on historical rates. The Mesaverde is currently producing 32 MCFD with 0.03 BCPD while the Pictured Cliffs is historically produced at 2 MCFD with less than 1 BCPD. The recommended allocation percentages after downhole commingling would be set as a percentage of the total rate with the Mesaverde attributing 95% of gas production and 95 % of condensate production. The Pictured Cliffs would be allocated at 5% of gas production and 5 % of condensate production. The actual commercial value of the commingled production will not be less than the sum of the values of the production from each of the common sources of supply.

Attached to aid in your review are plats showing the location of the well and offset wells in the same formation, a historical and recent production plot and a C-102 for each formation. This spacing unit is located on a federal lease (SF-078781) and we will send a copy of the application to the BLM as

their notice. Should you have questions concerning this matter, please contact me at (303) 830-5344.

Sincerely,



Pamela W. Staley

Enclosures

cc: Khanh Vu  
Gail Jefferson  
Proration File  
Well File

Frank Chavez, Supervisor  
NMOCD District III  
1000 Rio Brazos Road  
Aztec, NM 87410

Duane Spencer  
Bureau of Land Management  
1235 La Plata Hwy.  
Farmington, NM 87401

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

Requirements

- (1) Name and address of the operator:

Amoco Production Company  
P.O. Box 800  
Denver, CO 80201

- (2) Lease name, well number, well location, name of the pools to be commingled:

Lease Name: Bruington

Well Number: LS #3

Well Location: 1625' FSL & 800' FWL  
Unit G Section 6-T30N-R11W  
San Juan County, New Mexico

Pools Commingled: Blanco Mesaverde Pool (Pool IDN 72319)  
Aztec Pictured Cliffs Pool (Pool IDN 71280)

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

Attached

- (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.

The Blanco Mesaverde produced an average stabilized rate of 32 MCFD and 0.03 BCPD. The Aztec Pictured Cliffs zone historically produced at an average rate of about 2 MCFD and less than 1 BCPD.

- (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.

Aztec Pictured Cliffs Completion:	Historical production curve attached.
Blanco Mesaverde Completion:	Historical production curve attached.

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

Bottomhole pressures were estimated from 72 hour shut-in pressures during a packer leakage test for the well. Estimated bottomhole pressure in the Pictured Cliffs formation is 482 PSI while the estimated bottomhole pressure in the Mesaverde is 464 PSI. See attached calculations.

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

The two formations do not produce any fluids that are expected to prohibit commingling, or promote the creation of emulsions or scale.

- (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:

Since the BTU content of the produced gasses are very similar, we would expect the commingled production to have a similar value as the sum of the individual streams.

- (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:

The allocation method that we plan to use for this commingled well is as follows. Both formations historically produced at stabilized rates until the Pictured Cliffs became temporarily abandoned due to low productivity. We recommend that the Mesaverde and Pictured Cliffs formations gas and condensate be allocated based on historical rates. The Mesaverde is currently producing 32 MCFD with 0.03 BCPD while the Pictured Cliffs is historically produced at 2 MCFD with less than 1 BCPD. The recommended allocation percentages after downhole commingling would be set as a percentage of the total rate with the Mesaverde attributing 95% of gas production and 95 % of condensate production. The Pictured Cliffs would be allocated at 5% of gas production and 5 % of condensate production. The actual commercial value of the commingled production will not be less than the sum of the values of the production from each of the common sources of supply.

- (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.

BLM will receive a copy of this application by certified mail. The offsetting operators listed on the attached sheet will receive a copy of this application by certified mail.

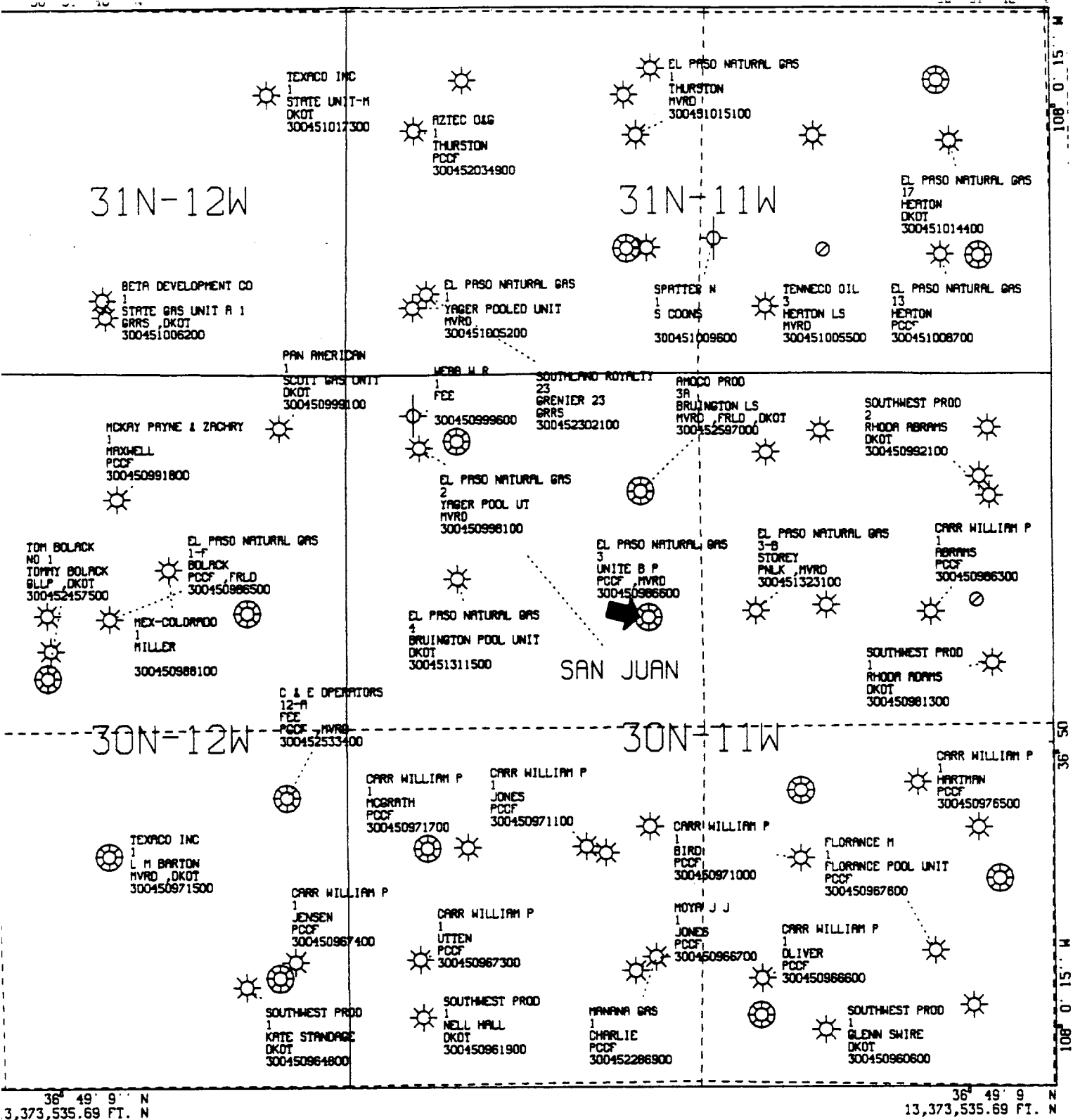
- (11) Referencing NMOCD Order No. 10470 Rule 303 (D) (11): In a case where there is diversity of ownership between the zones to be commingled (including working royalty, or overriding royalty interest), the applicant shall submit a statement that all such interest owners have been notified in writing of the proposed commingling.

All interest owners in the two formations will receive a copy of this application by certified mail.

LIST OF ADDRESSES FOR OFFSET OPERATORS  
Bruington LS #3

- 1 Meridian Oil, Inc.  
P.O. Box 4289  
Farmington, NM 87499





AMOCO PRODUCTION COMPANY  
PLAT MAP  
Bruington LS 3  
Offset Wells

SCALE 1 IN. = 2.000 FT. APR 28. 1995



NEW MEXICO  
OIL CONSERVATION COMMISSION

Form C-128

WELL LOCATION AND/OR GAS PRORATION PLAT

DATE JANUARY 15, 1957

OPERATOR EL PASO NATURAL GAS COMPANY LEASE BRUINGTON POOL UNIT SF 078781

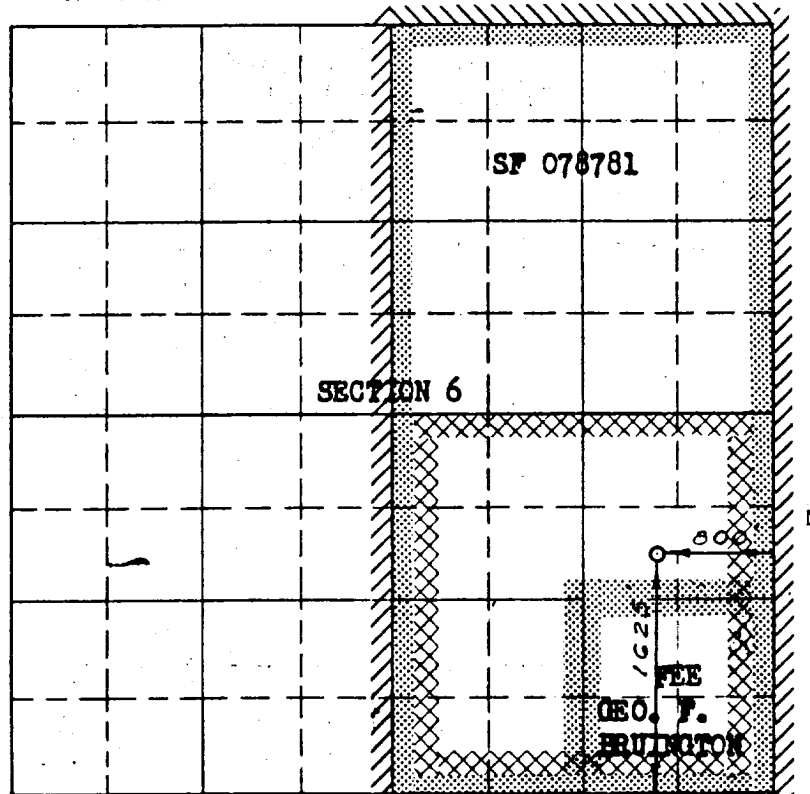
WELL NO. 3 (PM) SECTION 6 TOWNSHIP 30-N RANGE 11-W NMPM

LOCATED 1625 FEET FROM SOUTH LINE 800 FEET FROM EAST LINE

SAN JUAN COUNTY, NEW MEXICO G.L. ELEVATION 5873

NAME OF PRODUCING FORMATION P.C. & M.V. POOL AZTEC EXTEN. - PC 157.12 ~~200~~ ACRES (PC)  
320.12 AC. (MV)  
314.26 (1881 PLAT)

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



Scale 4 inches equal 1 mile

RECEIVED  
JAN 17 1957  
U. S. GEOLOGICAL SURVEY  
FARMINGTON, NEW MEXICO

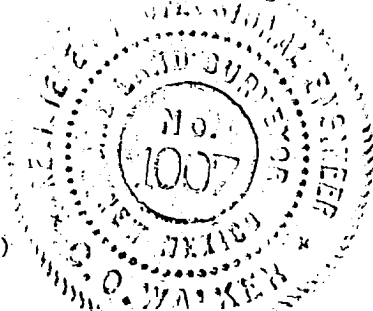
NOTE

This section of  
form is to be used  
for gas wells only

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 DECEMBER 21, 1956

C. O. Walker  
Registered Professional Engineer and/or Land Surveyor



(Seal)

Farmington, New Mexico

1. Is this well a Dual Comp.  
Yes X No \_\_\_\_\_
2. If the answer to Question 1  
is yes, are there any other dually  
completed wells within the  
dedicated acreage.  
Yes \_\_\_\_\_ No X

Name Original Signed D. L. Ellsworth

Position Petroleum Engineer

Representing El Paso Natural Gas

Address Box 997, Farmington, N

1000 Lease: BRUINGTON LS Retrieval Code: 251, 045, 30N11W06100MV 1000

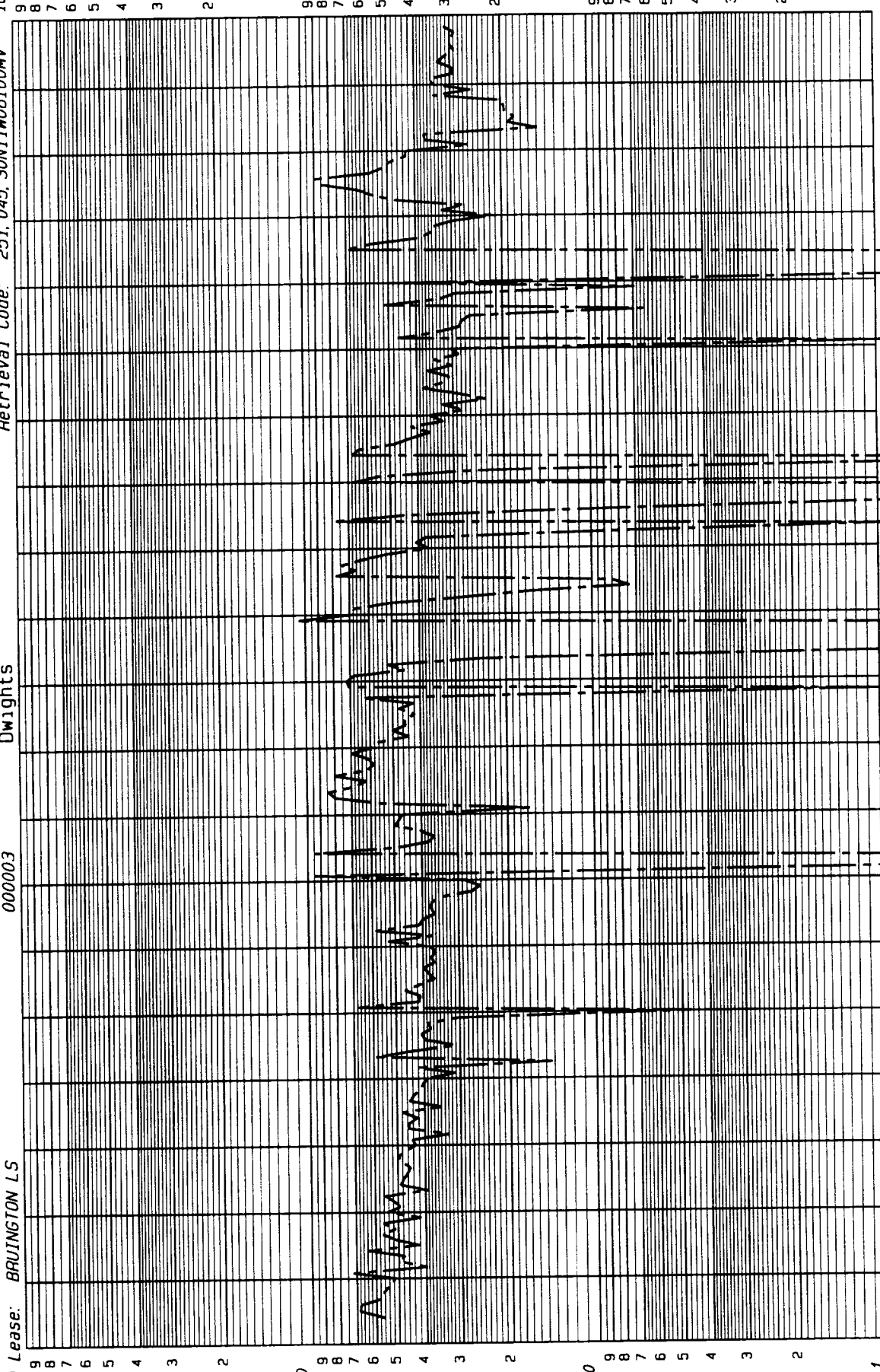
Dwights

000003

1000 Lease: BRUINGTON LS

OIL (BBL/DAY)

GAS (MCF/DAY)



County: SAN JUAN  
Field: BLANCO (MESAVERT) MV  
Reservoir: MESAVERT  
Operator: AMOCO PRODUCTION CO  
Oil Cum: 48 61 30N 11W  
Gas Cum: 748870  
State: NM

Date: 02-13-96

F.P. Date 02-58

67-  
Annual  
Data

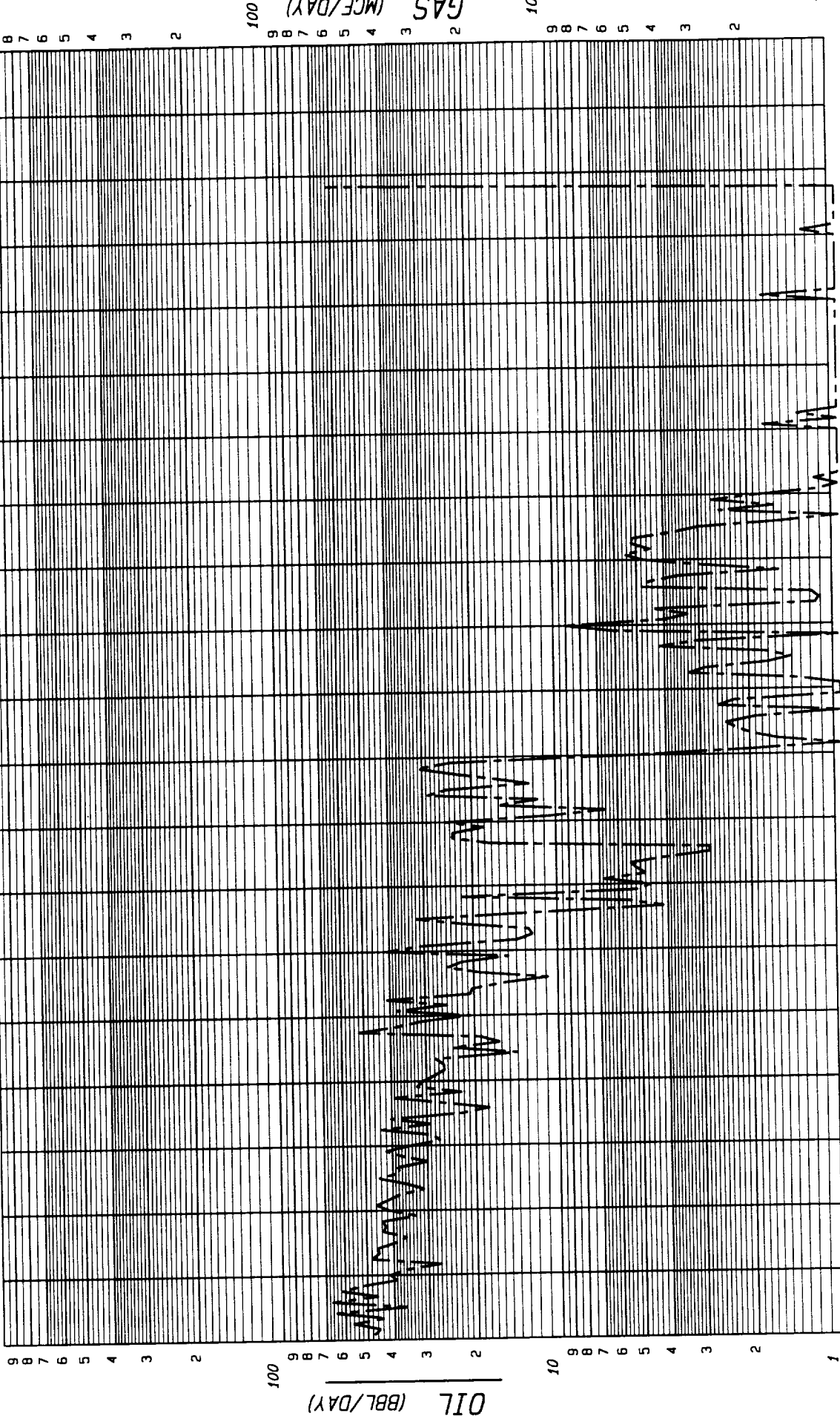
1000 Lease: BRUINGTON LS

Dwights

000003

Retrieval Code: 251, 045, 30N11W06I00PC

1000

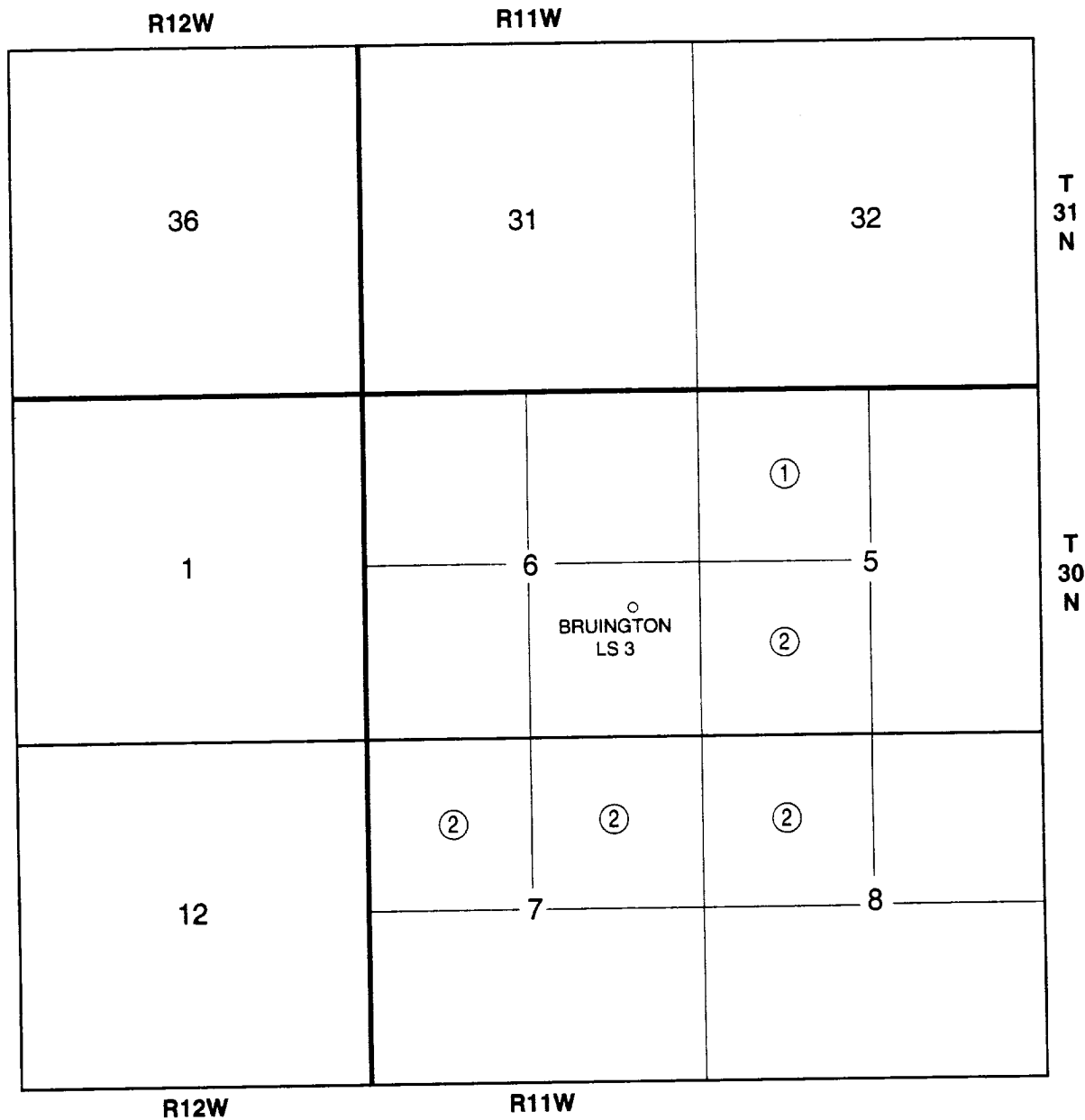


County: SAN JUAN State: NM  
Field: AZTEC (PICTURED CLIFFS) PC  
Reservoir: PICTURED CLIFFS  
Operator: AMOCO PRODUCTION CO  
Oil Cum: 0 Gas Cum: 305979  
Location: 61 30N 11W

Date: 02-13-96

F.P. Date 02-58

**Amoco Production Company**  
 Offset Operator Plat  
 Bruington LS 3  
 T30N-R11W Sec. 6  
 Blanco Pictured Cliffs Formation



- ① Amoco Production Company
- ② Meridian Oil Production Inc.

643

T30N-R11W Sec. 6

5355\_9.PM5\1195

OIL CONSERVATION DIVISION  
NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

I-6-30-11

Operator: AMOCO PRODUCTION COMPANY Lease/Well #: BRUINGTON LS 003  
Meter #: 71881 RTU: 0-000-00 County: SAN JUAN

	NAME RESERVOIR OR POOL	TYPE PROD	METHOD PROD	MEDIUM PROD
PR OMP	BRUINGTON LS 003 APC 71880	GAS	FLOW	TBG
WR OMP	BRUINGTON LS 003 BMV 71881	GAS	FLOW	TBG

PRE-FLOW SHUT-IN PRESSURE DATA

	Hour/Date Shut-In	Length of Time Shut-In	SI Press. PSIG	Stabilized
PR OMP	06/15/94	72	411	no
WR OMP	06/15/94	72	326	yes

FLOW TEST DATE NO.1

Commenced at (hour, date)* 9:20 AM 6-15-94				Zone Producing (Upr/Lwr)	
TIME (hour, date)	LAPSED TIME SINCE*	PC Upper	PRESSURE M.V. Lower	Prod Temp.	REMARKS
06/15/94	Day 1	BLINDED 397	315		Both Zones SI
06/16/94	Day 2	429	475		Both Zones SI
06/17/94	Day 3	429	475		Both Zones SI
06/18/94	Day 4	411	326		flowed lower zone
06/19/94	Day 5	409	324		"
06/20/94	Day 6	428	316		4

Production rate during test

Oil: BOPD based on BBLs in Hrs Grav GOR  
Gas: MFCPD: Tested thru (Orifice or Meter): METER

MID-TEST SHUT-IN PRESSURE DATA

	Hour, Date SI	Length of Time SI	SI Press. PSIG	Stabilized (yes/no)
PR OMP	BLINDED			
WR OMP	9:20 A.M. - 6-15-94	50 HOURS	475*	316*

(Continue on reverse side)

RECEIVED  
JUN 21 1994  
OIL CONSERVATION DIVISION  
SANDOZ

69896900 00001	ZJAM63	69896900 00001	ZJAM63
617000 00		710000 01	
AMOCO PRODUCTION COMPANY		MINERALS MANAGEMENT SERVICE	
P O BOX 591		ROYALTY MANAGEMENT PROGRAM	
TULSA	OK 74102-0591	PO BOX 5810 TA	
		DENVER	CO 80217-5810

69896900 00001	ZJAM63	69896900 00001	ZJAM63
712152 00		923286 00	
GRACE A BRUINGTON ESTATE		W L PETERS	
LEONA OLIVER, GUARDIAN		MARY PETERS MCCULLEY ATTY IN FACT	
C/O JOSEPH F BURNS ATTY-AT-LAW		441 LONGLEAF ROAD	
109 SOUTH MESA VERDE		SHREVEPORT	
AZTEC	NM 87410-2142		LA 71106-1221

69881100 00001	ZJAM63	69896900 00001	ZJAM63
616847 00		449599 00	
WILLIAM P CARR		PAUL SLAYTON	
8333 DOUGLAS SUITE 950		P O BOX 2035	
DALLAS	TX 75225-5811	ROSWELL	NM 88202-2035

69876900 00001	ZJAM63	69896900 00001	ZJAM63
603416 25		923248 00	
UNOCO INC		MARY ELIZABETH WALKER LIFE ESTATE	
P O BOX 951063		1617 SOUTH COLUMBIA DRIVE	
DALLAS	TX 75395-1063	WEST COLUMBIA	TX 77486-3607

9896900 00001	ZJAM63	69896900 00001	ZJAM63
26370 00		923042 00	
L PASO PRODUCTION COMPANY		MARTHE PETERS WERLLA	
P O BOX 840656		PETER CLAUDE JACOBSEN ATTY IN FACT	
DALLAS	TX 75284-0656	3724 CRESTLINE ROAD	
		FORT WORTH	TX 76107-3334

9896900 00001	ZJAM63
24825 00	
AZEL L GENTLE	
117 SOUTH MICHIGAN	
OSWELL	NM 88201-4339

69896900 00001	ZJAM63
91769 00	
IANSON MCBRIDE PETROLEUM COMPANY	
W/ WUIDOSO STATE BANK	
ATTN T A ANDERSON	
P O DRAWER B	
UIDOSO	NM 88345-7505

69896900 00001	ZJAM63
022999 00	
MARY MCCULLEY	
441 LONGLEAF DRIVE	
SHREVEPORT	LA 71106-1221