

Ernie Busch

From: Ernie Busch
To: David Catanach
Subject: TEXACO EXPL/PROD INC (DHC)
Date: Friday, January 27, 1995 10:32AM
Priority: High

C.W. ROBERTS #8A
17-25N-03W
RECOMMEND: APPROVAL

C-115 -- Operator's Monthly Report (Continuation)

| | | | | | | | | | |
|----------|-------------------------|-------|--------|------------|-------|------|----|----|----|
| Operator | UNION OIL OF CALIFORNIA | OGRID | 023708 | Month/Year | 07/94 | Page | 26 | of | 37 |
|----------|-------------------------|-------|--------|------------|-------|------|----|----|----|

| | | | | INJECTION | | | PRODUCTION | | | | DISPOSITION OF OIL, GAS, AND WATER | | | | | | |
|--|-----------------------|-------------|----------------|------------------------|---|---------------------------------------|------------------------------|-----------------------------|------------------------|-------------------------------|-------------------------------------|--|------------------------------|--------------------------------|------------------------|-------------------------------------|--|
| 7 POOL NO. AND NAME Property No. and Name Well No. & U-L-S-T-R API # | 8 C O D E | 9 Volume | 10 Pressure | 11 C O D E | 12 Barrels of oil/conden- sate produced | 13 Barrels of water produced | 14 MCF Gas Produced | 15 Days Prod- used | 16 C O D E | 17 Point of Disposition | 18 Gas BTU or Oil API Gravity | 19 Oil on hand at beginning of month | 20 Volumes (BBL'S/MCF) | 21 Trans- porter OGAD | 22 C O D E | 23 On hand at end of month | |
| 013 D-06-26N-06W 30-039-06740 | S | | | 2 | 0 | 0 | 0 | 0 | 3 | | | | | | 4 | | |
| 015 L11-26N-07W 30-039-06544 | F | | | | 0 | 0 | 2231 | 31 | | | | | | | | | |
| 016 C-25-27N-07W 30-039-06927 | F | | | | 0 | 0 | 850 | 31 | | | | | | | | | |
| 017 C-02-26N-07W 30-039-06736 | F | | | | 0 | 0 | 709 | 31 | | | | | | | | | |
| 018R C-35-27N-07W 30-039-22204 | F | | | | 0 | 0 | 2108 | 31 | | | | | | | | | |
| 022 K-23-27N-07W 30-039-06973 | F | | | | 0 | 0 | 919 | 31 | | | | | | | | | |
| 024 M-32-27N-06W 30-039-06773 | F | | | | 0 | 0 | 2394 | 31 | | | | | | | | | |
| 025 A-36-27N-07W 30-039-06838 | F | | | | 0 | 0 | 871 | 31 | | | | | | | | | |
| 026 L-33-27N-07W 30-039-06802 | F | | | | 0 | 0 | 787 | 31 | | | | | | | | | |
| 027 M-13-27N-07W 30-039-07035 | F | | | | 0 | 0 | 318 | 31 | | | | | | | | | |
| 028 B-29-27N-06W 30-039-06919 | S | | | | 0 | 0 | 0 | 0 | | | | | | | | | |
| 031 P-36-27N-07W 30-039-06766 | F | | | | 0 | 0 | 969 | 31 | | | | | | | | | |
| 034 K-28-27N-07W 30-039-06891 | F | | | | 0 | 0 | 423 | 31 | | | | | | | | | |
| 035 K-34-27N-07W 30-039-06809 | S | | | | 0 | 0 | 0 | 0 | | | | | | | | | |



Texaco Exploration and Production Inc

3300 N. Butler
Farmington, NM 87401

December 30, 1994

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: David Catanach

RE: **Application for exception to NMOCD Rule 303-A: Downhole Commingle of
C.W. Robert No. 8-A 1700' FNL & 990' FEL, Unit H, Sec. 17-T25N-R3W,
NMPM, Rio Arriba County, New Mexico**

Dear Mr. Catanach:

Texaco Exploration and Production Inc. respectfully requests administrative approval to downhole commingle the Blanco Mesaverde and the West Lindrith Gallup/Dakota within the referenced well. Approval of this application would require an exception to NMOCD Rule 303-a. Please accept the attached information in your consideration of this matter. All offset operators were notified of this request by certified mail and were sent a copy of the supporting information (copy of return receipt cards attached).

The subject well is currently completed in the West Lindrith Gallup/Dakota and producing through 2-3/8" tubing. A "dual" completion would require that the Gallup/Dakota be pumped under packer and the Mesaverde be flowed up the casing-tubing annulus. Pumping the Gallup/Dakota under packer would be inefficient due to gas locking. Flowing the Mesaverde up the annulus would be inefficient due to wellbore loading and the inability to swab. The downhole commingling of these zones will offer an economic method of production without reservoir damage, waste reserves, or violation of correlative rights.

If you have any questions concerning this matter please contact Mr. Robert Schaffitzel at (505) 325-4397, ext. 27. Your attention to this matter is greatly appreciated.

Sincerely,

Ted A. Tipton
Operating Unit Manager

RFS/s

Attachments
NMOCD-Aztec
file

RECEIVED
JAN 03 1995

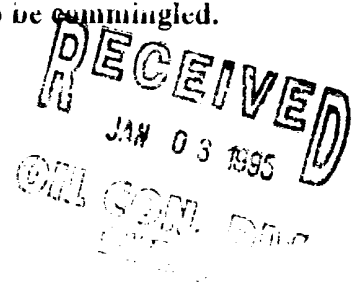
OIL CON. DIV.
BTL 3

Application for Exception to Rule 303-Segregation of Production From Pools

- (1) **Name and address of the operator:** Texaco Exploration and Production
3300 N. Butler Suite 100
Farmington, NM 87401

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

Lease Name: C.W. Roberts
Well Number: 8-A
Well Location: 1700' FNL & 990' FEL, Unit H, Sec. 17
T25N-R3W, NMPM
Rio Arriba County, New Mexico



Pools to Commingle: Blanco Mesaverde and 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, II, III)

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

The C-115 for C.W. Roberts No. 8-A Gallup/Dakota production is attached (Attachment IV). No Production data exists for the proposed Mesaverde completion. However, attached is a C-115 showing production from the nearest Mesaverde completions(Attachment V). The Mesaverde completion in the C.W. Roberts No. 8-A is expected to perform in a similar manner.

- (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 for statistical purposes. (This requirement may be dispensed with in the case of a newly completed or recently completed well which has little or 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 is a new completion and has not produced long enough to create an accurate decline curve. Decline curves of offsets C.W. Roberts No. 4 and C.W. Roberts No. 5 are attached (Attachments VI-A, VI-B).

Mesaverde - New completion, no production history is available. Decline curves of offsets C.W. Roberts No. 7 and C.W. Roberts No. 8 are attached (Attachments VII-A, VII-B). The Mesaverde completion in the C.W. Roberts No. 8-A is expected to perform in a similar manner.

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

The Mesaverde and Gallup/Dakota bottom hole pressure is estimated based on offset data (New Mexico Packer Leakage Test 9/94 C.W. Roberts No.6).

Mesaverde: 465 psi (Attachment VIII)
Gallup/Dakota: 920 psi (Attachment VIII)

Actual Mesaverde P_{BH} will be obtained using shut-in testing upon completion.

Application for Exception to Rule 303-Segregation of Production From Pools
Requirements Continued.

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

The fluids have no abnormal components that would prohibit commingling, or promote the creation of emulsions or scale. 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 individual streams.**

| <u>Current Gallup/Dakota Prod.</u> | | <u>Anticipated Mesaverde Prod.</u> | |
|------------------------------------|-----|------------------------------------|-----|
| Oil, BOPD | 23 | Oil, BOPD | 3 |
| Gas, MCFD | 138 | Gas, MCFD | 405 |
| Water, BWPD | 15 | Water, BWPD | 0 |

The combined production from the Gallup/Dakota and Mesaverde formations will be approximately 543 MCFD, 26 BOPD, and 15 BWPD.

The Mechanics of the wellbore are not conducive to a "dual" completion. Given the 5-1/2" casing, a dual completion would require that the Gallup/Dakota be pumped under a packer and the Mesaverde be flowed up the casing-tubing annulus. Pumping the Gallup/Dakota under a packer would be inefficient due to gas locking. Flowing the Mesaverde up the annulus would be inefficient due to wellbore loading and the inability to swab. Therefore, it is requested that commingling be approved.

- (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.**

Using our anticipated rates as shown in item #8 as an example, allocation will be calculated as follows:

| | <u>Gas</u> | <u>Oil</u> | <u>Water</u> |
|---------------|----------------|--------------|---------------|
| Mesaverde | $405/543=75\%$ | $3/26=12\%$ | $0/15=0\%$ |
| Gallup/Dakota | $138/543=25\%$ | $23/26=88\%$ | $15/15=100\%$ |

The actual production data obtained prior to and following the commingling process will be presented to the Aztec NMOCD District office to arrive factors for splitting the future production stream.

- (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 (Attachment IX).

OIL CONSERVATION DIVISION

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

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Denver OD, Arama, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

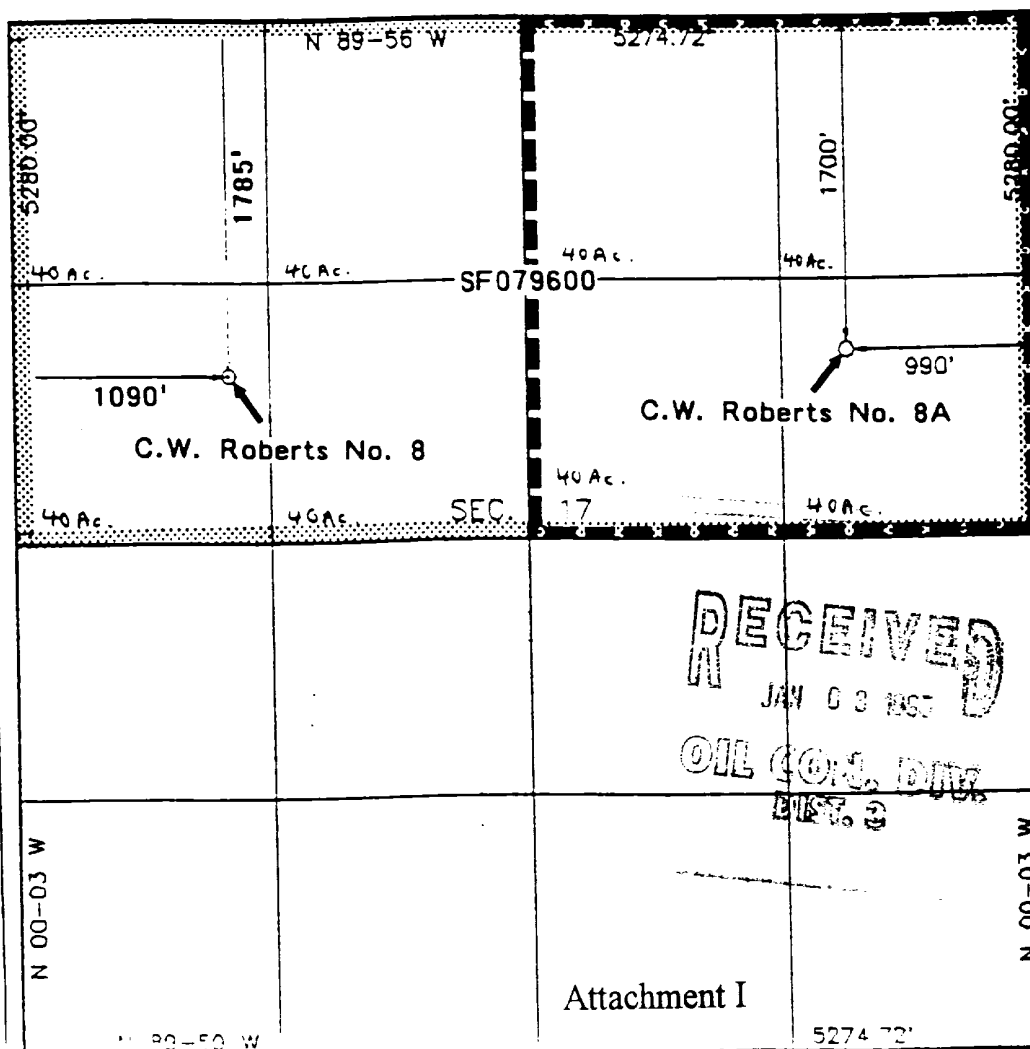
WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

| | | | | | |
|---------------------------|----------------------|------------------------------|------------------------|-----------------------------------|--|
| Operator TEXACO | | Lease C.W. ROBERTS | | Well No. 8A | |
| Unit Letter H | Section 17 | Township 25 NORTH | Range 3 WEST | County NMTRM RIO ARRIBA | |

| | | | |
|---|--|---|--|
| Actual Footage Location of Well: 1700' feet from the NORTH line and 990' feet from the EAST line | | | |
| Ground level Elev. 7251' UG | Producing Formation Mesa Verde Gallup-Dakota | Pool Blanco, Mesa Verde West Lindrith Gallup-Dakota | Dedicated Acreage: 320/160 Acres |

- Outline the acreage dedicated to the subject well by colored pencil or machine marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc?
☐ Yes ☐ No If answer is "yes" type of consolidation _____
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

| |
|--------------------------------------|
| Signature <i>Rayce Mariott</i> |
| Printed Name Rayce Mariott |
| Position Division Surveyor |
| Company TEXACO E&P Inc |
| Date 2-9-94 |

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was placed from field notes (actual surveys made by me or under my supervision, and that the same is true as correct to the best of my knowledge as belief.

12/11/93

| |
|--|
| Date Surveyed <i>12/11/93</i> |
| Signature <i>Neale Edwards</i> |
| Professional Seal NEW MEXICO 6857 REGISTERED LAND SURVEYOR |
| Certification Neale Edwards |

OFFSET OPERATORS C.W. ROBERTS LEASE SEC. 17 T25N / R03W

| | | |
|-----------------------------|---------------------|---------------------------|
| BEARTOOTH OIL & GAS CO 7 | SCHALK DEV. CO 8 | 9 |
| SOUTHLAND ROYALTY CO. | MERIDIAN OIL, INC | MERIDIAN OIL, INC |
| 18 TEXACO | 17 TEXACO | CURTIS J. LITTLE 16 |
| 19 TEXACO | 20 TEXACO | SCHALK DEV. CO |
| | | ELLIOTT OIL CO. INC 21 |

**OFFSET OPERATORS
C.W. ROBERTS #8 A
T25N / R03W**

Beartooth Oil & Gas Co.
745 Pinyon Ct.
Fruita, CO 81521

Curtis J. Little, Oil & Gas
2346 E. 20th St.
Farmington, NM 87499
(505)327-6176

Elliot Oil Co.
Box 1355
Roswell, NM 88202
(505)622-5840

Meridian Oil, Inc.
3535 E. 30th
Farmington, NM 87402

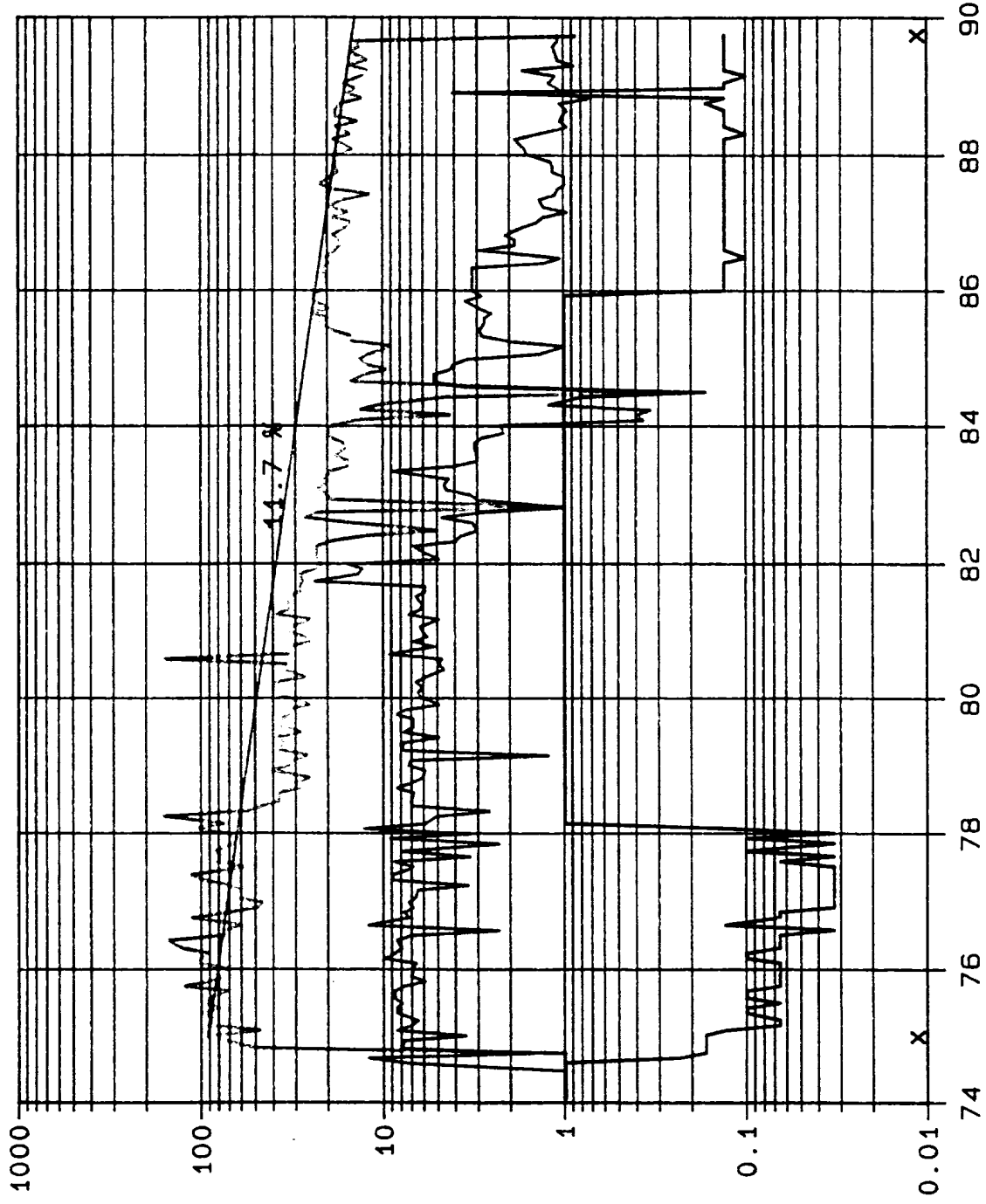
Schalk Development Co.
P.O. Box 25825
Albuquerque, NM 87125
(505)881-6649

Southland Royalty Company
P.O. Box 4239
2919 Allen Pkwy.
Houston, TX 77210

C W ROBERTS 000004

LEASE DATA
LSE 25N03W17MF
FLD 8044442
OPER 720127
ZONE GALLUP DAF
25N-3W-17
COUNTY 039
STATE 30

STATUS 9-89
CO 26 MBO
CG 203 MCMF
BOPD 1
BWPD 0
MCFPD 1
WELLS 1
CI 0 MBWI
BWIPD 0



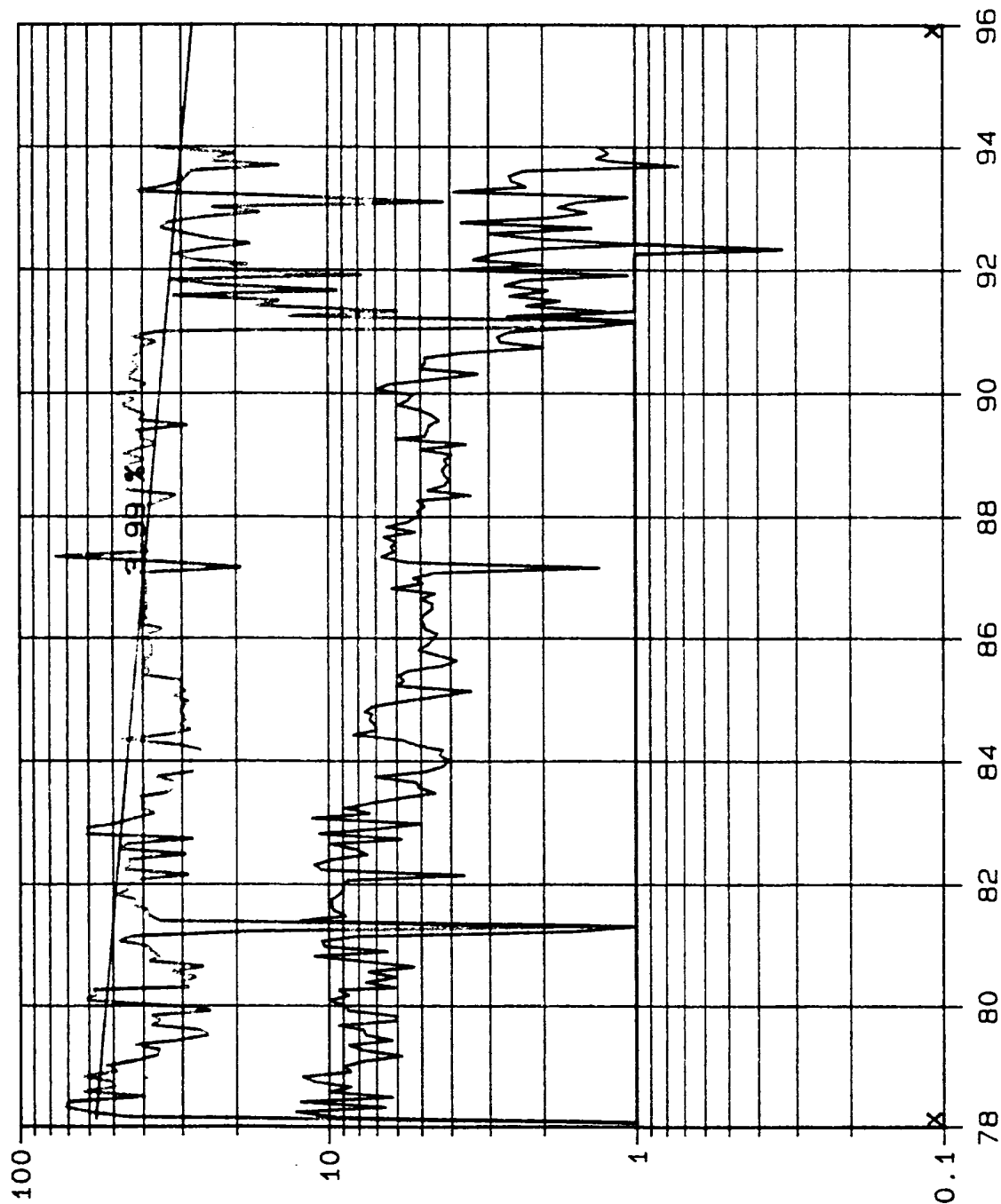
BOPD
BWPD
MCFPD

Attachment VI

YEARS

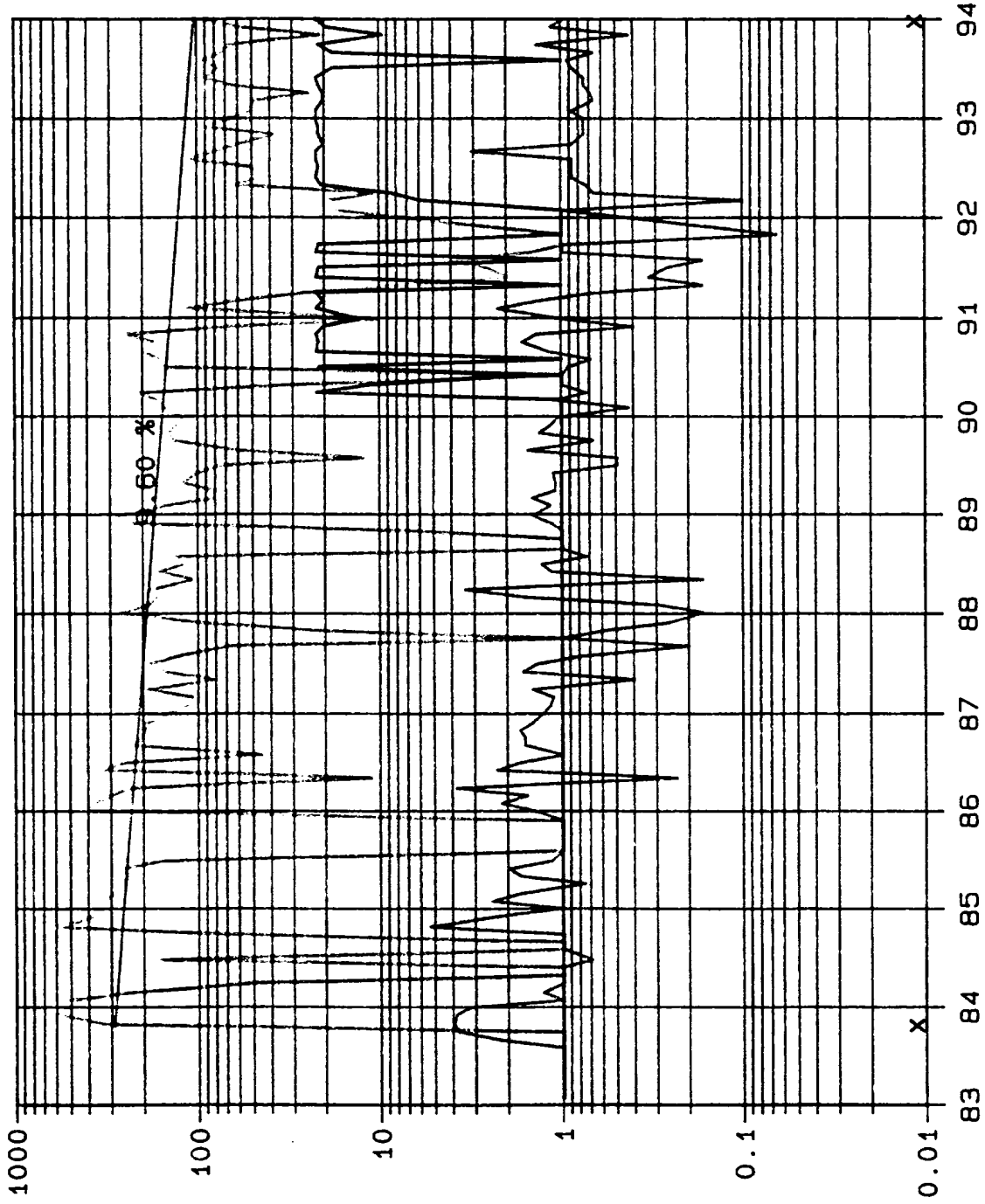
C W ROBERTS 000005

LEASE DATA
LSE 25N03W17F0
FLD 8044442
OPER 158628
ZONE GALLUP DAI
25N-3W-17
COUNTY 039
STATE 30
STATUS 12-93
CO 32 M50
CG 211 MMCF
BOPD 1
BWPD 0
MCFPD 36
WELLS 1
CI 0 MBWI
BWIPD 0



C W ROBERTS 000007

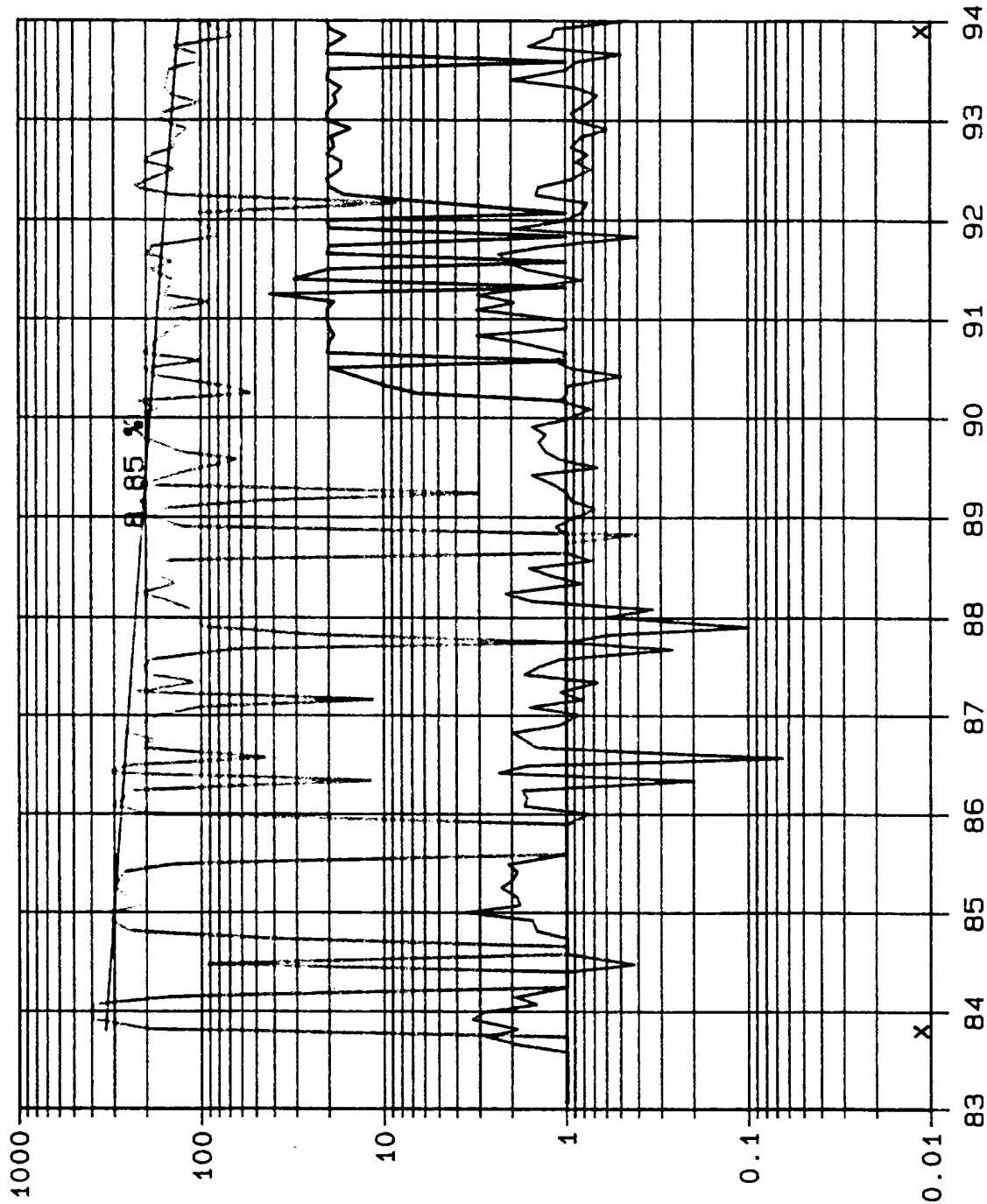
LEASE DATA
LSE 25N03W17J
FLD 8007074
OPER 158628
ZONE MESAVERDE
25N-3W-17
COUNTY 039
STATE 30
STATUS 12-93
CO 4 MBO
CG 475 MMCF
BOPD 1
BWPD 22
NCFPD 90
WELLS 1
CI 0 MBWI
BWIPD 0



YEARS

C W ROBERTS 000008

LEASE DATA
 LSE 25N03W17E
 FLD 8007074
 OPER 158628
 ZONE MESAVERDE
 25N-3W-17
 COUNTY 039
 STATE 30
 STATUS 12-93
 CO 4 MB0
 CG 549 MMCF
 BOPD 0
 BWPD 20
 MCFFD 101
 WELLS 1
 CI 0 HBWI
 BNIPD 0



BOPD
 BWPD
 MCFFD

YEARS



12/06/94

CW ROBERTS No. 8A

1700' FNL & 990' FEL
SE/NE, Sec. 17, T25N, R3W
w/ PROPOSED MESA VERDE COMPLETION

ELEVATION: 7251' GR

SPUD DATE: 7-02-94

COMPL DATE: 7-19-94

FORMATION TOPS:

Ojo Alamo 3352'
Kirtland 3461'
Fruitland 3527'
Pictured Cliffs 3740'
Lewis 3859'
Chacra 4647'
Cliff House 5388'
Menefee 5486'
Pt. Lookout 5886'
Mancos 6048'
Gallup 7066'
Niobrara "A" 7091'
Niobrara "B" 7124'
Sanostee 7565'
Carlisle 7682'
Greenhorn 7852'
Graneros 7912'
Dakota IX 7950'
Dakota I 8080'
Morrison 8152'

PROPOSED MESA VERDE PERFS:

5819'-5832', 5887'-5896', 5944'-5954'
4 SPF

GALLUP PERFS: 7124'-7137'

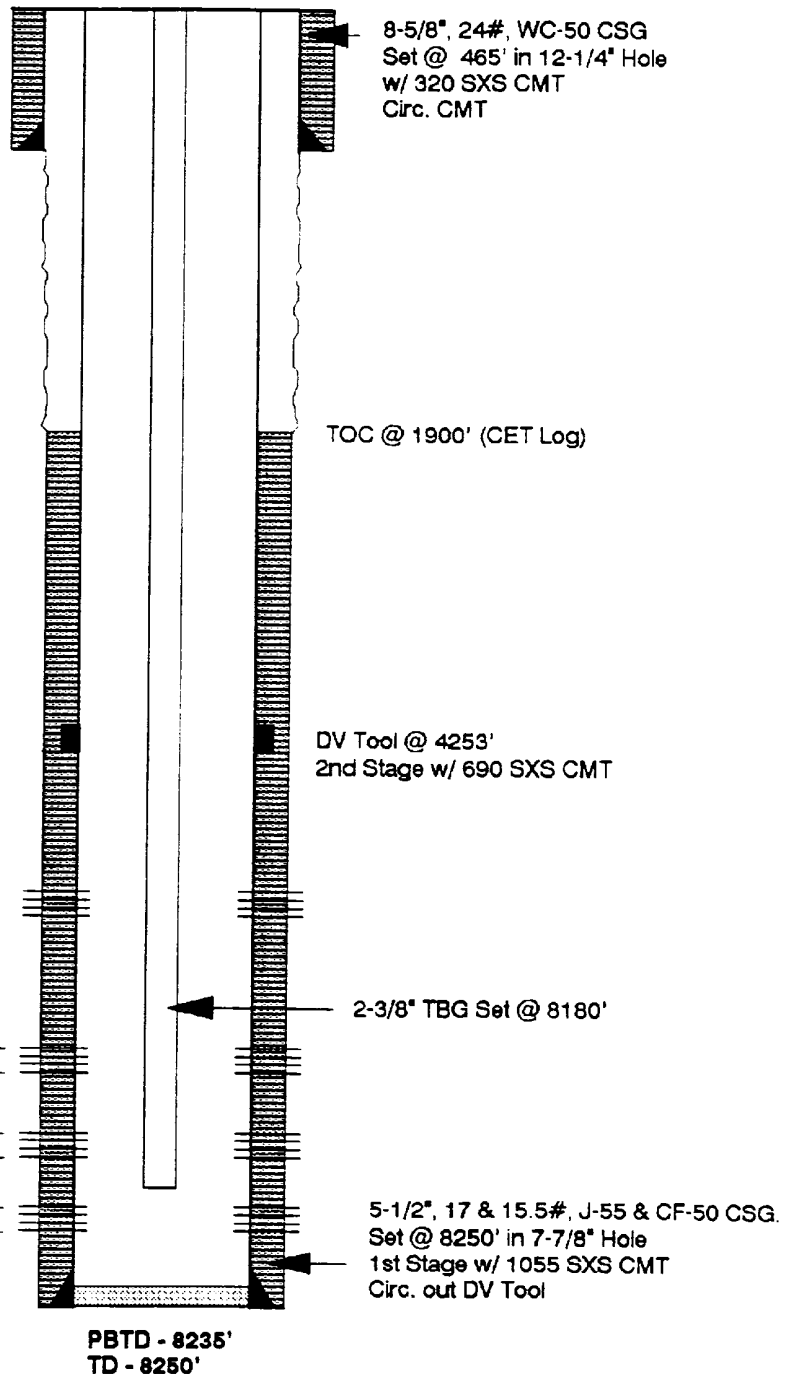
4 SPF, 0.39" dia., 52 Holes
850 gl HCl, 118500 gl XL gel, 271000# 20-40

U. DAKOTA PERFS: 7950'-7970'

2 SPF, 0.39" dia., 40 Holes
800 gl HCl, 68,822 gl XL gel, 150,000# 20-40

L. DAKOTA PERFS: 8080'-8112'

2 SPF, 0.39" dia., 64 Holes
1000 gl HCl, 48,000 gl XL gel, 154,000# Sand



C.W. Roberts No. 8-A
Mesaverde Workover Procedure

1. MIRUSU, POOH w/ rods, NDWH, NUBOP, POOH w/ 2-3/8" tubing.
2. RIH w/ 5-1/2" RBP on 2-3/8" TBG, set RBP @ 6000'. Test RBP and CSG to 3000 psi. Dump one SK of sand on top of RBP. Spot 500 gals 15% HCL across perf interval. POOH w/ TBG.
3. RU wireline and GIH with a 3-1/8" OD Schlumberger "Heg" cased carrier gun and perforate the following Mesaverde Intervals with 4 SPF (0.39" holes), 90 degree phasing:

| <u>Interval</u> | <u>Ft</u> | <u>Holes</u> |
|-----------------|-----------|--------------|
| 5819-5832' | 13' | 52 |
| 5887-5896' | 9' | 36 |
| 5944-5954' | 10' | 40 |

4. RU Service Company. Install Frac Tree. Break down perfs (flush acid) with 2 % KCL water (establish rate and pressure).
5. Fracture stimulate perforated interval using 119,000 # 20/40 Brady Sand and 51,775 Gal 40 # Linear Gel. Tail Brady Sand with 24,000 # resin coated sand.

16,000 gals Pad
1,000 gals 1 ppg
2,000 gals 2 ppg
3,000 gals 3 ppg
5,000 gals 4 ppg
5,000 gals 5 ppg
10,000 gals 6 ppg
4,000 gals 6 ppg (Resin Sand)
5,775 gals Flush

Max Pressure 3000 psi
Average rate 40 BPM

6. Shut well in overnight to allow resin coating to cure.
7. Flow back. RIH with 2-3/8" TBG to 5948'. Cleanout if necessary. Swab/flow test Mesaverde interval. NDBOP, NUWH, RDMOSU. Obtain shut-in pressure and fluid level. Put Mesaverde on production and test.
8. If Mesaverde completion is successful, notify NMOCD Aztec District office with our intent to commingle. MIRUSU, NDWH, NUBOP. POOH with 2-3/8" TBG. RIH w/ retrieving head on 2-3/8" TBG and POOH w/ RBP @ 6000'. GIH and cleanout to PBTD. POOH. RIH w/ rods, pump and 2-3/8" production tubing. NDBOP, NUWH, RDMOSU. Put well on downhole commingled production (MV and GP/DK). Obtain stable commingled oil, gas, and water production rates for allocation formula.
9. If Mesaverde completion is unsuccessful, cement squeeze Mesaverde. MIRUSU, NDWH, NUBOP. POOH RIH w/ retrieving head on 2-3/8" tubing and POOH w/ RBP @ 6000'. GIH and cleanout to PBTD. POOH. RIH with Gallup/Dakota production equipment. NDBOP, NUWH, RDMOSU. Return well to G/DK production.

RECEIVED
JAN 03 1995
OIL CON. DIV.
DIST. 3