

Santa Fe Energy Resources, Inc.
550 W. Texas, Suite 1330
Midland, TX 79701

DHC 11.27.95
1175
OIL CONSERVATION DIVISION
RECEIVED
OCT 31 1995 8 52

October 31, 1995

~~Michael Stogner~~

New Mexico Oil Conservation District
P. O. Box 1980
Hobbs, NM 88240

Dear Mr. Stogner:

Santa Fe Energy Resources hereby requests approval to commingle Bone Spring and Delaware production in the Mesa Verde "7" Federal #2, located 1980' FWL & 660' FNL of Sec 7, T24S, R32E, in Lea County, NM. A plat of the area and C-116 forms from each zone are attached. A production decline curve for the Bone Spring zone is also attached. The Delaware has not produced long enough for a decent trend. The estimated bottom-hole pressure for each zone is around 1000 psi. Both zones produce 42° to 41° API gravity oil and the water analysis from each zone is attached. The value of the commingled oil will be the same. The oil is currently commingled at the battery from different wells.

The production will be allocated based on a constant exponential decline from the Bone Spring of 61% (see decline curve). The Delaware zone will be allocated the difference between the actual total production and the calculated Bone Spring production.

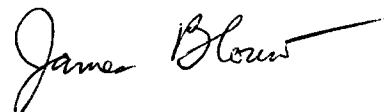
$P_{BS} = P_{BSi} \times .92$ (Initial BS rate of 324 BOPM) where P_{BS} is the monthly BS production and P_{BSi} is the previous month BS production.

$P_{DEL} = P_{TOTAL} - P_{BS}$

Gas production will be assigned to the Bone Spring using a 500 GOR with the difference allocated to the Delaware.

Santa Fe Energy Resources operates all the offset proration units and the BLM has been notified in writing of the proposed commingling.

Sincerely,



James Blount
Production Engineer

BS { R. 10177
10240
10342
10376

96229 - MV BS-GOR = 2000

96191 - MV DELAWARE 2000
8999

10091

R. 1032.4
10376
10177

10246
10303
10419

MESA VERDE "7" FEDERAL #2
DOWN HOLE COMMINGLING REQUEST DATA

- 1) The total combined daily oil production from the zones will be less than 50 BOPD. The Bone Spring zone at 8600' had a stabilized production averaging 10 BOPD and the Delaware zone at 8300' currently produces 40 BOPD and is declining.
- 2) Both zones require artificial lift.
- 3) The Bone Spring zone produced 10 BWPD and the Delaware currently produces 100 BWPD but has been steadily declining.
- 4) The fluids are compatible with the oil 41 to 42 gravity in each zone.
- 5) The total value of the crude will not be reduced by commingling. The oil is currently commingled at the battery from the two intervals in different wells. Both zones have API gravity oil in the 41 to 42 degree range.
- 6) Ownership of the zones is common.
- 7) The commingling will not jeopardize the efficiency of the recovery operations. It will allow each zone to be produced to a lower level than if the zones were produced separately.

Mesa Verde "7" Fed #2
660' FNL & 1980' FWL
Section 7, T-24-S, R-32-E
40 Acre Proration

SFER, INC. Offset Acreage

Santa Fe Energy Resources, Inc.
Central Division
Midland, Texas

LEA COUNTY, NEW MEXICO

OSPREY PROSPECT

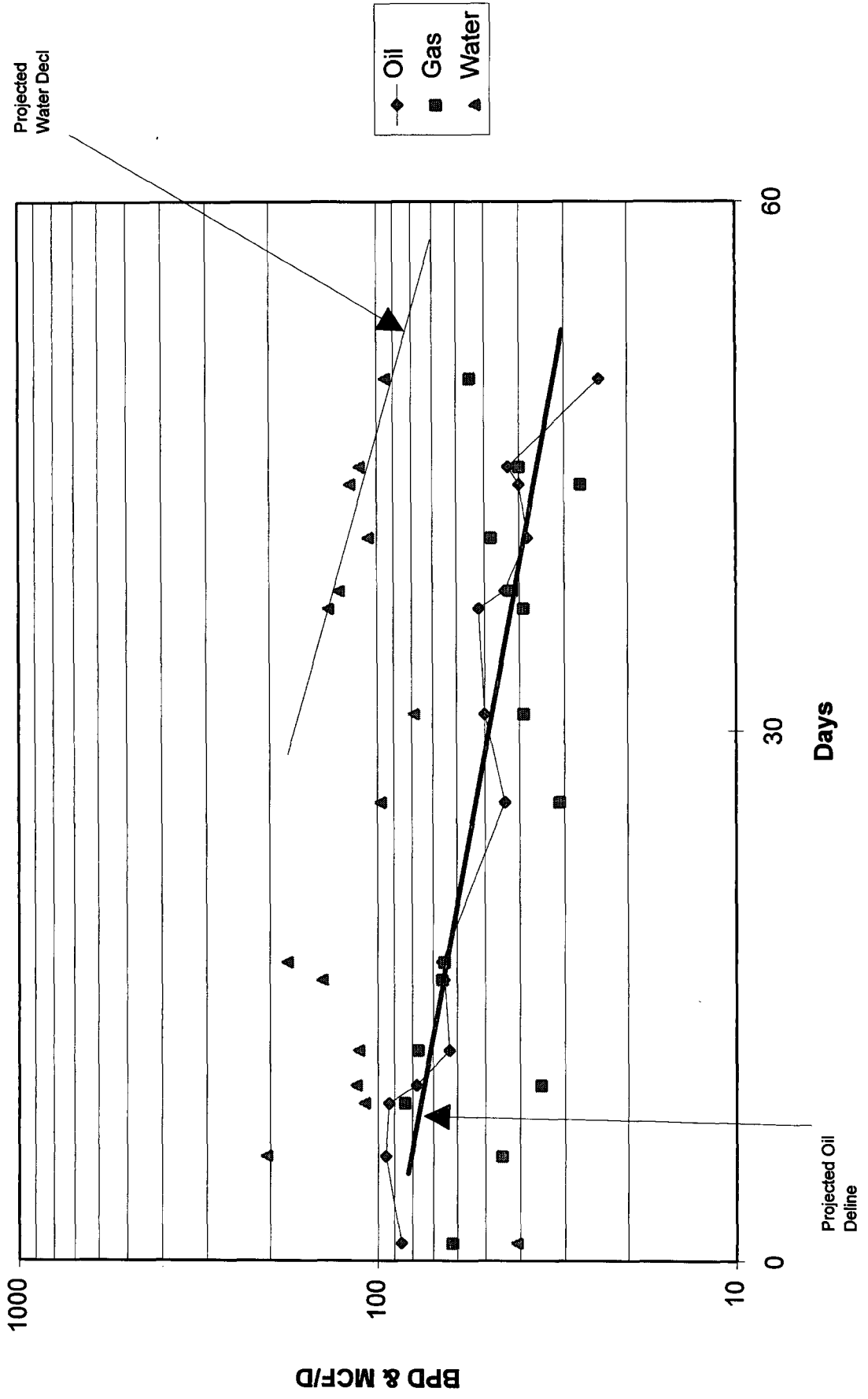
DATE: 10/31/95

SCALE: 1"=4000'

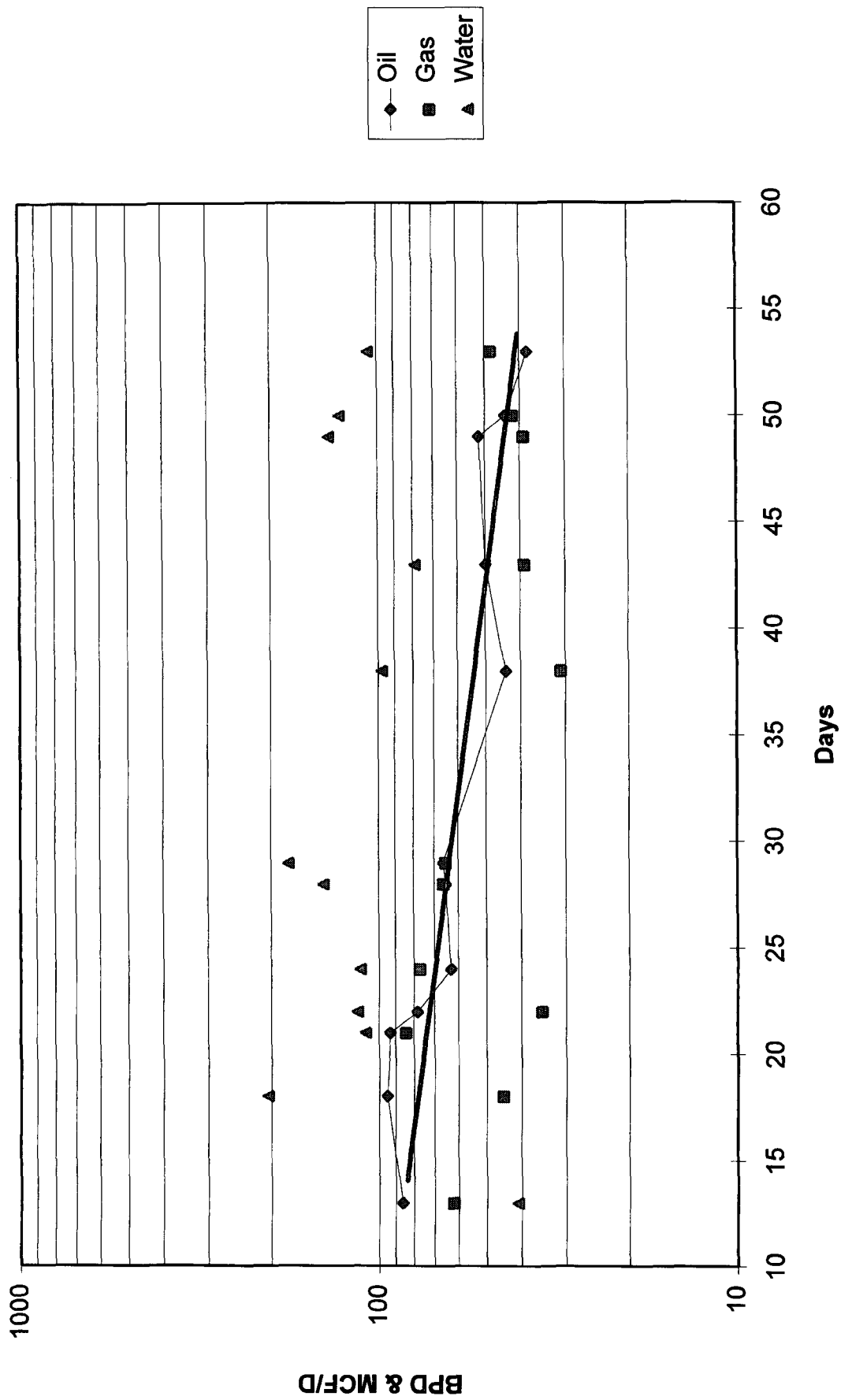
FILE:



Mesa Verde 7 Fed #2 Delaware



Mesa Verde 7 Fed #2 Delaware



L
S

Laboratory Services, Inc.

1031 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

WATER ANALYSIS

COMPANY Enron Oil & Gas Company

SAMPLE Mesa Verde 7 Federal #2 BONE SPRING

SAMPLED BY Ray Gallagher - Pro Well

DATE TAKEN 9/23/94 4:30PM

REMARKS

Barium as Ba 0.00

Carbonate alkalinity PPM 0

Bicarbonate alkalinity PPM 1,680

pH at Lab 7.39

Specific Gravity @ 60° F 1.079

Magnesium as Mg 2,842

Total Hardness as CaCO₃ 4,900

Chlorides as Cl 62,481

Sulfate as SO₄ 1,775

Iron as Fe 40.25

Potassium 16.25

Hydrogen Sulfide 0.00

Resistivity Ohms 0.1150 23.4° C

Total Dissolved Solids 91,750

Calcium as CA 2,058

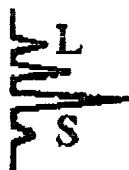
Nitrate 33.00

Results reported as Parts per Million unless stated

Langelier Saturation Index +1.89

Analysis by Rolland Perry

Date 09-25-94

**Laboratory Services, Inc.**1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

WATER ANALYSISCOMPANY Santa Fe EnergySAMPLE Mesa Verde 7-2 DELAWARE

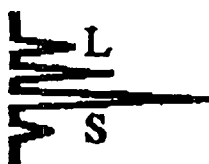
SAMPLED BY _____

DATE TAKEN _____

REMARKS _____

Barium as Ba	5.00	
Carbonate alkalinity PPM	0	
Bicarbonate alkalinity PPM	104	
pH at Lab	6.45	
Specific Gravity @ 60° F	1.165	
Magnesium as Mg	22,910	
Total Hardness as CaCO ₃	39,500	
Chlorides as Cl	150,025	
Sulfate as SO ₄	375	
Iron as Fe	186.25	
Potassium	53.75	
Hydrogen Sulfide	0.00	
Resistivity Ohms	0.0420	23.3° C
Total Dissolved Solids	213,750	
Calcium as CA	16,590	
Nitrate	13.20	

Results reported as Parts per Million unless statedLangelier Saturation Index +0.9Analysis by Rolland Perry
Date: 11-01-95

**Laboratory Services, Inc.**1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

ASTM Distillation**Santa Fe Energy**
Attention: Mr. Pete Stull
P. O. Box 2327
Carlsbad, New Mexico 88220

BONE SPRING

24-Oct-95**Mesa Verde Fed. 7 #7****Sample Date: 10-18-95 11:00 AM****Sampled By: Lane Thorp-Pro Well****Percent Distilled Temperature**

IBP	118
5	187
10	218
20	272
30	338
40	420
50	509
60	585
70	678
80	730
90	764
95	774
EP	785

% Recovered = 99.0
% Residue = 1.0
% Loss = 0**API Gravity @ 60° F = 42.30****Rolland Perry**

Proposed

KB: 16.7'
GL: 3545.5'

TOC @ 3700'

TA @ 8150'

JSB 7-20-95

MESA VERDE #7" Fed #2
Sec 7, T24S, R32E
Lea County, NM

11 3/4" 42# K-55 @ 635 cmt d w/425 sx Cl C to surf

8 5/8" 32# K-55 @ 4470'
cmt d w/1275 sx Cl C & Lite to surf

2 7/8" 6.5 J-55 tbg @ 8596'
SN @ 8560'

2 1/2" x 1 1/2" x 30' pump
157-3/4", 92-7/8", & 91-1" Gr. D rods

Perfs: 8175-87' *DELAWARE*

Perfs: 8532-50' *BONE SPRING*

5 1/2" 15.5 & 17# K-55 @ 8700' cmt d w/570 sx PSL C + 385 sx Cl H

PBTD: 8608'

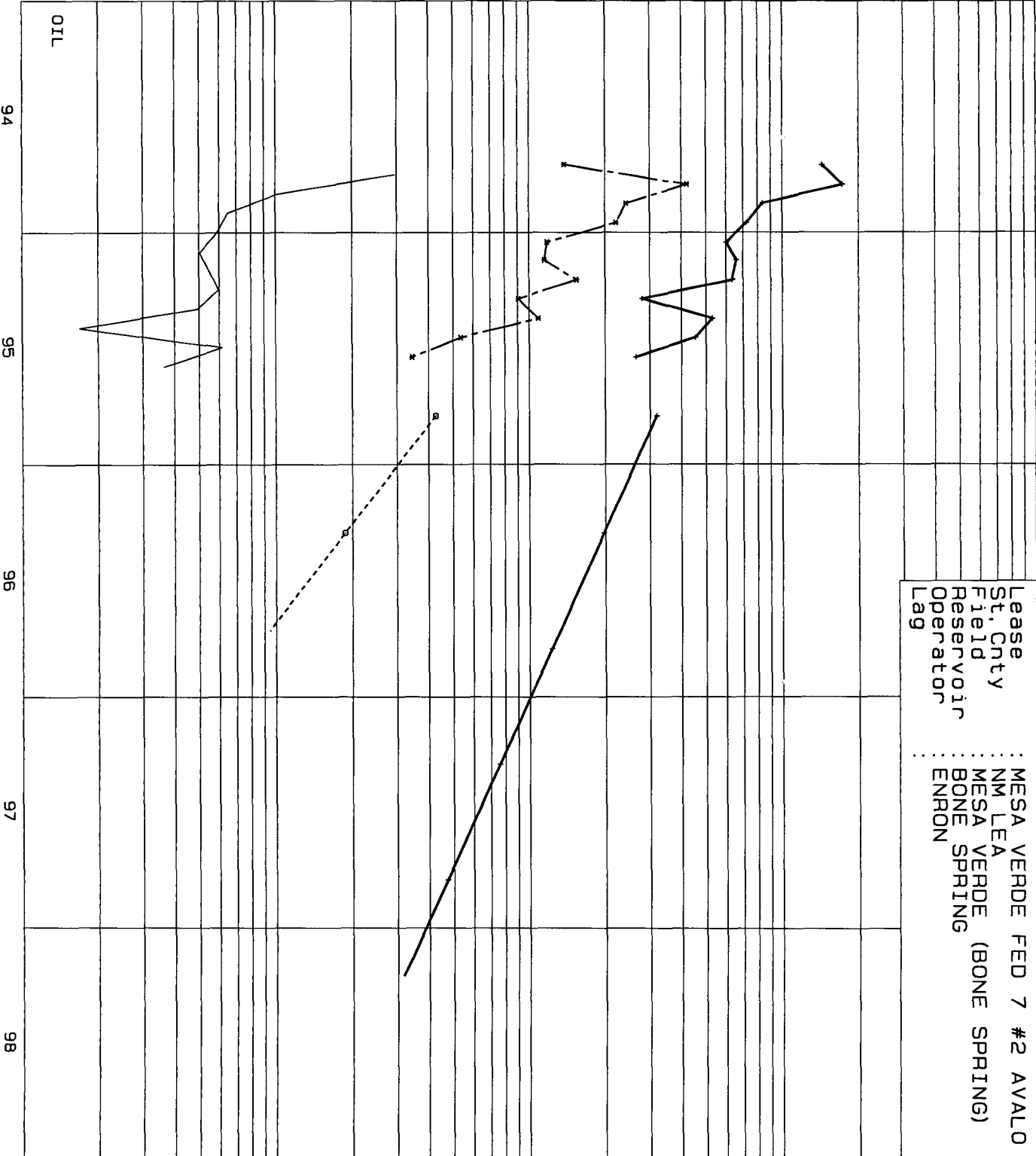
TD: 8700'

RESERVES AND ECONOMICS

---END- MO-YR	---GROSS PRODUCTION OIL	---GAS
1-95	.000	.000
2-95	.000	.000
3-95	.000	.000
4-95	.000	.000
5-95	.000	.000
6-95	.000	.000
7-95	.000	.000
8-95	.000	.000
9-95	.000	.000
10-95	.324	.173
11-95	.290	.146
12-95	.277	.132
1995	.891	.451
1-96	.255	.115
2-96	.218	.091
3-96	.216	.087
4-96	.195	.074
5-96	.189	.067
6-96	.166	.056
7-96	.158	.051
8-96	.146	.044
9-96	.131	.037
10-96	.125	.034
11-96	.112	.028
12-96	.106	.026
1996	2.011	.709
12-97	.775	.138
12-98	.099	.011
12-99		
12-00		
12-01		
12-02		
12-03		
12-04		
12-05		
12-06		
12-07		
12-08		
12-09		
12-10		
12-11		
REM	.000	.000
TOT	3.777	1.310

91.4

100	1000	10000	100000	Water (bbl)
10	100	1000	10000	Gas (mcf)
1	10	100	1000	Oil (bbl)



Lease	MESA VERDE FED 7 #2 AVALO
St. Cnty	NM LEA
Field	MESA VERDE (BONE SPRING)
Reservoir	BONE SPRING
Operator	ENRON
Lag	

Oil	100.0
Gas	100.0
Water	100.0
Ref	10/95
Cum	18.018
EUR	20.613
Yrs	1.000
Q1	454.9
De	80.620
n	.000
Gab	100.0

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 2132
Order No. R-1834

APPLICATION OF HUMBLE OIL & REFINING
COMPANY FOR PERMISSION TO COMMINGLE
THE PRODUCTION FROM SEVERAL POOLS,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on November 30, 1960, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 8th day of December, 1960, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Humble Oil & Refining Company, is the owner and operator of the State "V" Lease consisting of the SW/4, W/2 SE/4, and NE/4 SE/4 of Section 10, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the applicant seeks permission to commingle the production from the Blinebry Oil Pool, Brunson Pool, Drinkard Pool, Hare Pool, Tubb Oil Pool and Wantz Abo Pool with the liquid production from the Blinebry Gas Pool and Tubb Gas Pool.

(4) That the applicant proposes to allocate production from the various pools on the basis of monthly well tests except that separate metering and separation facilities would be used for oil well and gas well completions.

(5) That the ownership of the above-described State "V" Lease is common at all depths.

-2-

CASE No. 2132

Order No. R-1834

IT IS THEREFORE ORDERED:

That the applicant, Humble Oil & Refining Company, be and the same is hereby authorized to commingle the production from the Blinebry Oil Pool, Brunson Pool, Drinkard Pool, Hare Pool, Tubb Oil Pool and Wantz Abo Pool with the liquid production from the Blinebry Gas Pool and the Tubb Gas Pool from all wells located on the State "V" Lease consisting of the SW/4, W/2 SE/4, and NE/4 SE/4 of Section 10, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, with allocation of production to the various pools on the basis of monthly well tests except that separate metering and separation facilities shall be used for oil well and gas well completions.

PROVIDED HOWEVER, That the applicant shall install separate metering facilities to the satisfaction of the Commission in the event any well producing from any of the above-mentioned pools shall become capable of making top unit allowable.

PROVIDED FURTHER, That the applicant shall install adequate facilities to permit the testing of all wells on the said State "V" Lease at least once each month to determine the individual production from each well.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JOHN BURROUGHS, Chairman

MURRAY E. MORGAN, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/

DHC-1175



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

RECEIVED
'95 NOV 13 AM 8 52

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

11/7 1995

GOVERNOR

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC	_____
DHC	_____X_____
NSL	_____
NSP	_____
SWD	_____
WFX	_____
PMX	_____

Gentlemen:

I have examined the application for the:

Santa Fe Energy Res. Inc. Mesa Verde 7 Fed # 2-C 7-24532e
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
Jerry Sexton
Supervisor, District 1

/ed