

T
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22
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R-30-E

YATES

YATES 34

35

CORRINE GRACE 36

4

Julia AJL Federal

HEYCO



1X



BEFORE THE
OIL CONSERVATION DIVISION

Case No. 11014 Exhibit No. 1

Submitted By:

Phillips Petroleum Company

Hearing Date: July 7 1994



1

1

Cabin Lake 34 Federal

Peak View

Salomeh

HEYCO

3

11

9

2

YATES

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Donell 3 Federal

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James A

Livingston Ridge

Jasmine AJI Federal

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POTASH LINE

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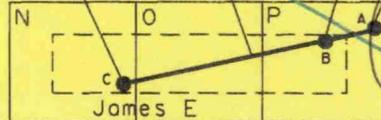
16

(C) Bottomhole Location

Proposed HW

(B) Start Pay Zone

(A) Surface Location



1 OPERATOR = BASS ENTERPRISES
WELL NAME = JAMES RANCH UNIT 48 #1

James Ranch Unit

15

14

13

James Ranch Unit

James Ranch Unit

- Approved Well
- Producing Oil Well
- ⊙ Water Injection (Pressure Maintenance)
- ⊙ Inactive Oil Well
- ⊙ Dry Holes

The Yates Kaleidoscope AKO Federal #1, located in Section 33, T21S, R30E is in the Cabin Lake Delaware pool, but not shown above.



PHILLIPS PETROLEUM COMPA
PERMIAN BASIN GEOLOGY

CABIN LAKE FIELD

T-21,22-S, R-30-E
EDDY CO., NEW MEXICO

0 2,000

SCALE (FEET)

SCALE	C 1	GEOLOGY BY	DATE
CONTOURED ON			3-9
TYPE INFO		DRAFTING	CAB
			R. COSS

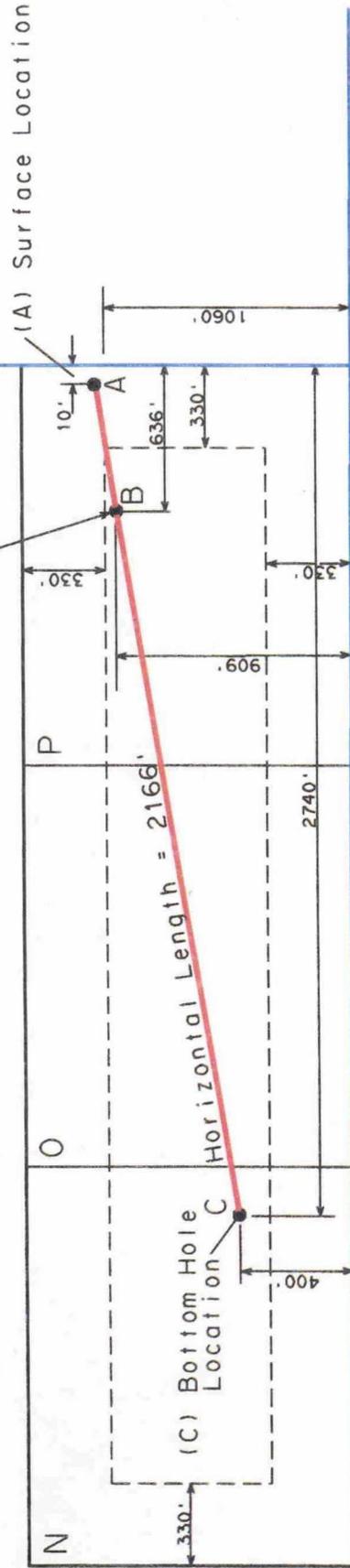


JAMES E #9: HORIZONTAL WELL APPLICATION
Cabin Lake - Delaware Pool Eddy County, NM
T-22-S R-30-E

Section 11

Section 12

(B) Start of pay zone



Surface Location: 10' FEL/ 1060' FSL
 S-11 T-22-S R-30-E

Bottomhole Location: 2740' FEL/ 400' FSL
 S-11 T-22-S R-30-E

Start of Pay Zone: 636' FEL/ 909' FSL
 S-11 T-22-S R-30-E

Section 14

Section 13

BEFORE THE
OIL CONSERVATION DIVISION 2
 Case No. 11014 Exhibit No. 2
 Submitted By:
Phillips Petroleum Company
 Hearing Date: July 7, 1994

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R-30-E

YATES

YATES 34

35

CORRINE GRACE 36

4

Julia AJL Federal

HEYCO



POOL BOUNDARY

BEFORE THE
OIL CONSERVATION DIVISION

Case No. 11014 Exhibit No. 3

Submitted By:

Phillips Petroleum Company

Hearing Date: July 7, 1994

Cabin Lake 34 Federal

Peak View

Solomeh

HEYCO 3

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YATES

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James A

Livingston Ridge

Jasmine AJL Federal

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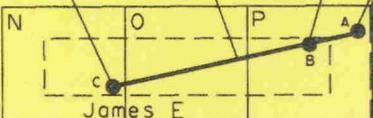
16

(C) Bottomhole Location

Proposed HW

(B) Start Pay Zone

(A) Surface Location



1 OPERATOR = BASS ENTERPRISES
WELL NAME = JAMES RANCH UNIT 48 #1

James Ranch Unit

15

James Ranch Unit

14

James Ranch Unit

13

- Approved Well
- Producing Oil Well
- ☉ Water Injection (Pressure Maintenance)
- ⊙ Inactive Oil Well
- ⊕ Dry Holes

The Yates Kaleidoscope AKO Federal #1, located in Section 33, T21S, R30E is in the Cabin Lake Delaware pool, but not shown above.

PHILLIPS 66 PHILLIPS PETROLEUM COMPANY
PERMIAN BASIN GEOLOGY

CABIN LAKE FIELD
T-21,22-S . R-30-E
EDDY CO., NEW MEXICO

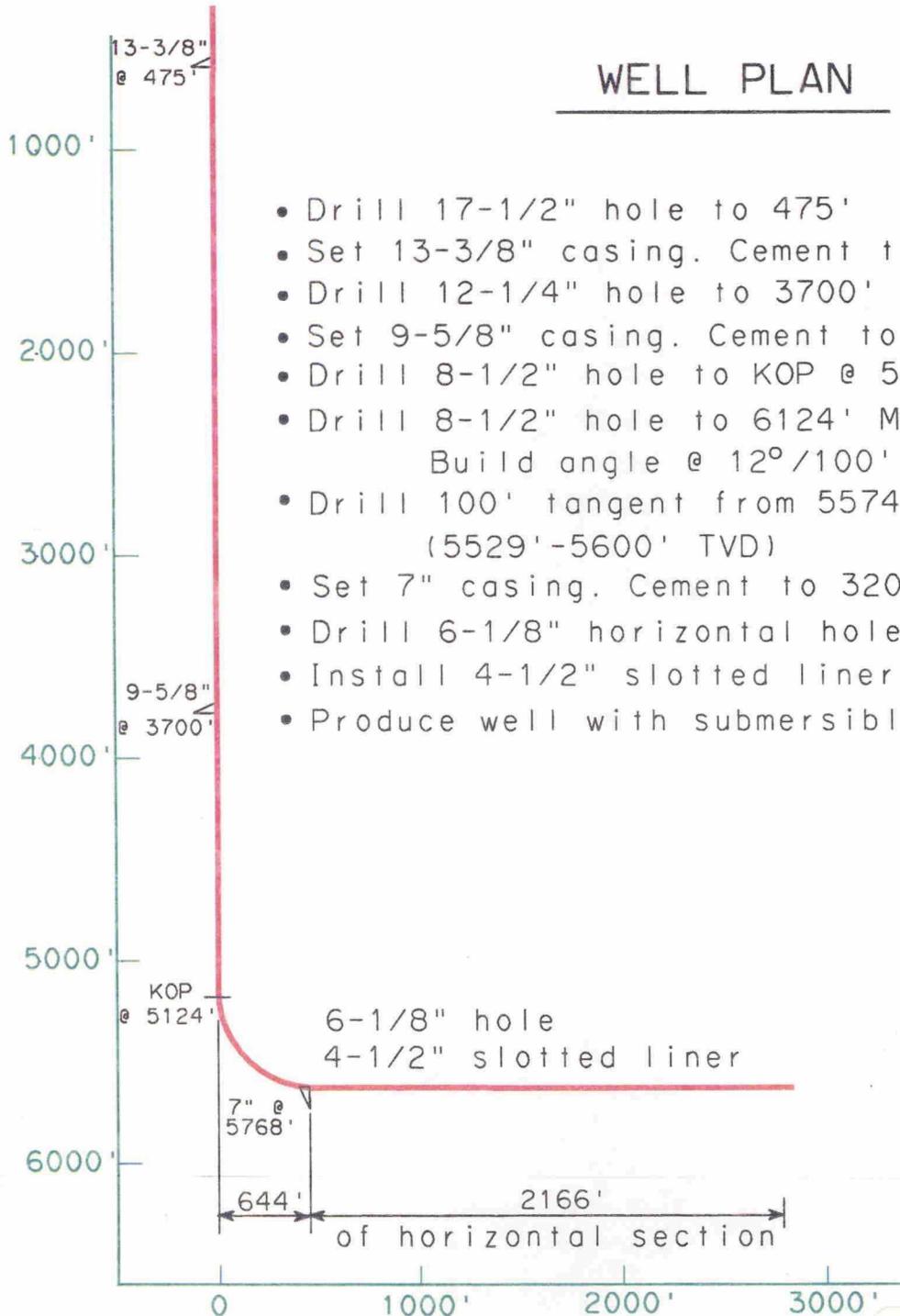
0 2,000
SCALE (FEET)

SCALE	C 1	GEOLOGY BY	DATE 3-94
CONTOURED ON	MAP NO. CABIN		
TYPE INFO	DRAFTING R. COSSIN		



JAMES E #9 HORIZONTAL WELL CABIN LAKE-DELAWARE POOL EDDY COUNTY, NEW MEXICO

WELL PLAN



- Drill 17-1/2" hole to 475'
- Set 13-3/8" casing. Cement to surface
- Drill 12-1/4" hole to 3700'
- Set 9-5/8" casing. Cement to surface
- Drill 8-1/2" hole to KOP @ 5124'
- Drill 8-1/2" hole to 6124' MD/ 5768' TVD
Build angle @ 12°/100' to 87°
- Drill 100' tangent from 5574'-5674' MD
(5529'-5600' TVD)
- Set 7" casing. Cement to 3200'
- Drill 6-1/8" horizontal hole 2166' long
- Install 4-1/2" slotted liner
- Produce well with submersible pump

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11014 Exhibit No. 4
Submitted By:
Phillips Petroleum Company
Hearing Date: July 7, 1994

BEFORE THE
 OIL CONSERVATION DIVISION
 Case No. 11014 Exhibit No. 5
 Submitted By:
 Phillips Petroleum Company
 Hearing Date: July 7 1994



**SPECTRAL DENSITY
 DUAL SPACED
 NEUTRON LOG**

COMPANY PHILLIPS PETROLEUM WELL JAMES -E- NO. 8 FIELD CABIN LAKE (DELAWARE) COUNTY EDDY STATE NM	COMPANY PHILLIPS PETROLEUM COMPANY	
	WELL JAMES -E- NO. 8	
	FIELD CABIN LAKE (DELAWARE)	
	COUNTY EDDY	STATE NM
API NO 30-015-27441		OTHER SERVICE
LOCATION 2247 FSL AND 1558 FEL SECTION 11, T-22-S, R-30-E		DLL-MSFL
SECT 11 TWP 22-S RGE 30-E		
PERMANENT DATUM G. L. ELEV. 3228		ELEV.
LOG MEASURED FROM K.B. 10.00 FT. ABOVE PERM DATUM		
DRILLING MEASURED FROM KELLY BUSHING		
DATE	08/06/93	
RUN NO.	ONE	
DEPTH-DRILLER	7600	
DEPTH-LOGGER	7604	
BTM. LOG INTER	7600	
TOP LOG INTER	50	
CASING DRILLER	8.625 @ 3500	
CASING-LOGGER	3502	
BIT SIZE	7.875	
TYPE FLUID IN HOLE	SALT GEL	
DENS. : VISC.	9.1 : 35	
PH : FLUID LOSS	9.5 : 8.0	
SOURCE OF SAMPLE	MUD PIT	
RM @ MEAS. TEMP.	.215 @ 85	
RMF @ MEAS. TEMP.	.204 @ 85	
RMC @ MEAS. TEMP.	.237 @ 85	
SOURCE RMT/C	MEAS. : MEAS.	
RM @ BHT	.147 @ 127	
TIME SINCE CIRC.	14.5 HOURS	
TIME ON BOTTOM	5:31 A.M.	
MAX. REC TEMP.	127 @ T.D.	
EQUIP. LOCATION	5194100.TX	
RECORDED BY	MART RILEY	
WITNESSED BY	K. SCHRANKO J. BROWN	

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21
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22
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R-30-E

YATES

YATES 34

35

CORRINE GRACE

36

Julia AJL Federal
HEYCO

Cabin Lake 34 Federal
HEYCO

Peak View

Salomeh

YATES

1

Done 1 Federal

James A

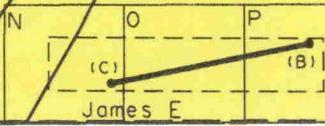
Livingston Ridge

Josmine AJL Federal

10

12

BASS



James E

JAMES E NO.16

James Ranch Unit

James Ranch Unit

James Ranch Unit

BEFORE THE
OIL CONSERVATION DIVISION
 Case No. 11014 Exhibit No. 6
 Submitted By:
Phillips Petroleum Company
 Hearing Date: July 7, 1994

PHILLIPS 66 PHILLIPS PETROLEUM COMPANY
 PERMIAN BASIN GEOLOGY

CABIN LAKE FIELD
 T-21,22-S, R-30-E
 EDDY CO., NEW MEXICO

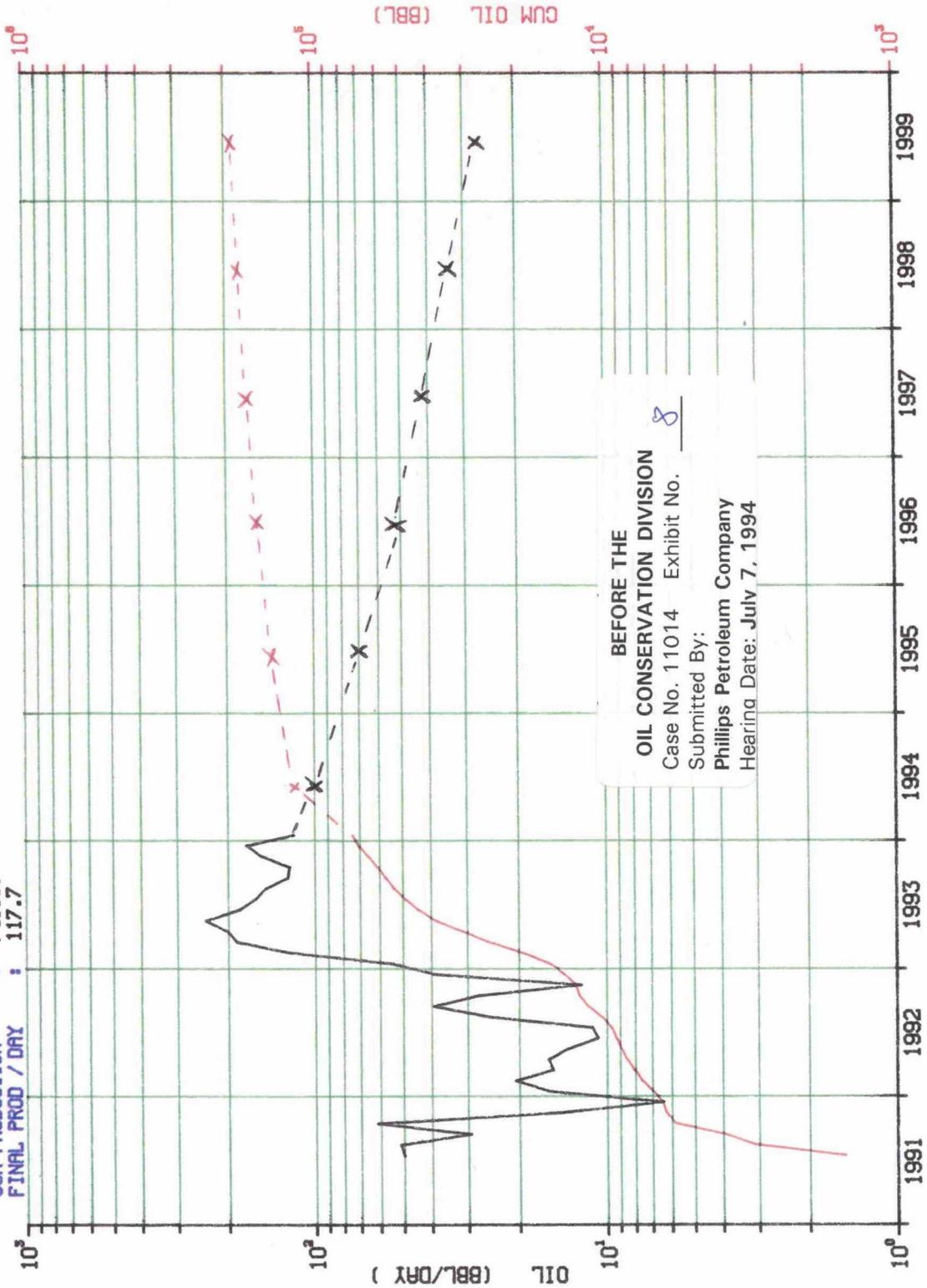
0 2,000
 SCALE (FEET)

SCALE	1/250'	GEOLOGY BY	J.L. BROWN	DATE	3-94
CONTOURED ON	MAIN CHERRY CANYON		MAP NO.	CBN LAKE 3	
TYPE INFO	PAY SAND		DRAFTING	R. COSSIN	



CUMS - 1/94
 74335. BBL OIL
 15841. MCF GAS
 159495. BBL WTR

7/91-1/94
 INITIAL PROD / DAY : 49.7
 REMAINING LIFE : 2.58
 CUM PRODUCTION : 74335.
 FINAL PROD / DAY : 117.7



BEFORE THE
 OIL CONSERVATION DIVISION
 Case No. 11014 Exhibit No. 8
 Submitted By:
 Phillips Petroleum Company
 Hearing Date: July 7, 1994

LEASE- 600136 : JAMES-E #11
 RESVR- 324 : CABIN LAKE
 WELL - 000011 PHS WELL PRODUCTION
 DELAWARE
 WELL-600136324000011
 API-30015266550000



JAMES E #9 HORIZONTAL WELL
CABIN LAKE- DELAWARE POOL
EDDY COUNTY, NEW MEXICO

DEA-44 "RESMOD-3" Model Input

<u>INPUT PARAMETER</u>	<u>VALUE</u>
Drainage Radius	660 feet
Horizontal length	2,166 feet
Thickness	40 feet
Reservoir Pressure	
Initial shut-in	2,700 psia
Flowing bottomhole	600 psia
Wellbore radius	4.25 inches
Permeability	
vertical	.2 md
horizontal	2.0 md
Porosity	18 %
Oil Viscosity	1.5 cp
Formation Vol. Factor	1.2
Initial Oil Saturation	50 %

6. Basis of the Models

This section describes the equations, correlations, and assumptions used in constructing the RESMOD3 reservoir production models. The mathematical symbols, in Section 9, are consistent with those presented in the literature and may differ from those used in the computer program.

6.1 DARCY UNITS

Unless stated otherwise, reservoir engineering equations in this report are in Darcy units which are defined by the equation

$$Q = \frac{KA \Delta P}{\mu \Delta x} \quad (6-1)$$

where

- Q = Flow Rate in Cubic Centimeters per Second
- A = Cross Sectional Area in Square Centimeters
- ΔP = Pressure Difference in Atmospheres
- Δx = Distance in Centimeters
- μ = Viscosity in Centipoise

The constant of proportionality, K, is in darcies. This is a definition.

6.2 OIL-FIELD UNITS

Changing from Darcy units to field units requires a conversion constant. The conversion constant for Eq. 6-1 is:

$$0.0011272$$

In radial flow equations such as

$$Q = \frac{2\pi Kh(Pe - Pw)}{\mu \ln\left(\frac{r_e}{r_w}\right)} \quad (6-2)$$

the "2 π " is replaced by

$$2\pi(0.0011272) = 0.0070822$$

which is sometimes written as

$$\left(\frac{1}{141.2}\right)$$

Field units for Eqs. 6-1 and 6-2 are as follows:

Q	=	Barrels/Day
K	=	Millidarcies
h	=	Feet
Pe and Pw	=	Pounds/Square Inch
r_e and r_w	=	Feet
A	=	Square Feet
$\Delta p/\Delta x$	=	Pounds/Square Inch/Foot

6.3 MODEL ASSUMPTIONS

It is important that the user appreciate the limitations and assumptions used in the model so that reasonable alterations to input parameters can be made. The models are explained in detail in the DEA-44 report *Horizontal Reservoir Models*. The most critical parameters are listed below.

6.3.1 Homogeneous

In reality, very few reservoir settings are purely homogeneous. Most heterogeneous settings have varying characteristics and can be described reasonably well by a set of "average" parameters. The "average" reservoir parameter inputs are applied over the total drainage area assigned to a vertical well. Thus, where the model is optimistic the parameters such as porosity, permeability and thickness can be varied to better match actual vertical well behavior.

6.3.2 Closed Tank

The model assumes a vertical well is draining an assigned radius bounded by no-flow boundaries. This limits the drive energy available and assumes an equal drainage from the total area.

6.3.3 Single-Phase Flow

The model deals with single-phase flow only, thus the relative permeability reductions caused by water and/or gas (in the oil case) are disregarded. Methods to account for this might include raising the skin or reducing permeability.

6.3.4 Pseudo-Steady State

The model does not consider flush or transient flow production. This can result in an under-estimate of initial production rates when compared to the historic initial vertical well production. Where high flush production exists, it is often better to disregard the early production profile and match the stabilized decline of the vertical wells.

Given an understanding of the assumptions inherent in the DEA-44 screening models, the user can quickly run cases to best match the historic vertical well production.

There will be a number of input parameter combinations which result in a close fit to actual field behavior. Site specific understanding of the reservoir and production behavior will dictate which particular combination is most appropriate for a given field. Having defined a set (or sets) of input parameters which closely match the vertical well behavior, the user can now use the model to predict the productivity of a horizontal well placed in the candidate reservoir.

6.3.5 Drainage Area

The model assumes that the horizontal well will drain an ellipse with a minor axis equal to the drainage radius assigned to the vertical well, and a inter-focii distance equal to horizontal well length. The productivity prediction is sensitive to the assigned vertical well drainage radius. The smaller the vertical well drainage radius and the longer the horizontal well length, the higher the productivity improvement predicted for a horizontal well versus a vertical well.

6.3.6 Vertical And Horizontal Permeability

With a vertical well, all flow is horizontal so only the horizontal permeability affects flow rate. With a horizontal well, some of the fluid flows vertically through the formation to the horizontal well, so both the vertical and horizontal permeability affect flow rates. The higher the ratio of horizontal to vertical permeability, the lower the predicted flow rate. Most horizontal wells undulate sinusoidally along their length. Thus they tend to cross horizontal permeability barriers (i.e., tight streaks). The model does not consider the localized effects of horizontal permeability barriers, but it does consider different values for horizontal and vertical permeability.

6.3.7 Reservoir Pressure

RESMOD3 assumes an equal pressure at the external boundary of the assigned drainage ellipse. The drive energy is limited to volume expansion. Therefore the productivity prediction will not take benefit from access to undrained (i.e., non-depleted) reservoir. Nor will it benefit from exterior pressure support (i.e., natural water drive) or a gravity drainage aspect. In many cases all three of these factors may be in existence.

6.3.8 Wellbore Pressure

The model predicts drive energy from the drawdown pressure existing between the reservoir boundary and the wellbore. The current RESMOD3 model does not take into account pressure losses in the wellbore, a factor which may be important in high flow-rate wells (5,000 to 10,000 BPD) or in long heavy-oil wells. The DEA-44 project has developed a program "HOPE" which predicts multiphase-flow pressure drops along segments of the wellbore. In cases where pressure drop may be a concern — "HOPE" can be run to calculate the magnitude of pressure loss along the well length. The wellbore pressure at the midpoint can then be assigned as wellbore pressure to approximate the effect of this factor on horizontal well productivity.

6.3.9 Horizontal Well Length

Although the model assumes uniform inflow along the wellbore length, production logs show that inflow in actual horizontal wells is often not uniform. The more varied the reservoir the more erratic the inflow along the well length. The more laterally variable the reservoir, the more likelihood of a horizontal well accessing "sweet spots" along its length. Drilling technology is constantly improving and statistics indicate that incremental well length is often not a major cost factor in simple completion designs. The user should assign a wellbore length consistent with field boundary and drilling system limitations. Wellbore length sensitivity runs should be made to examine the effect of drilling out of the pay or encountering varying amounts of the productive reservoir.

6.3.10 Residual Oil Saturation (Vertical & Horizontal)

The model allows the user to assign different residual oil saturations for the vertical and horizontal wells. Changing the residual oil factor changes the shape of the decline curve, but has no affect on the initial production rate. Vertical well residual saturations should be applied to the horizontal well as a worst case; then increasingly lower horizontal well residual saturations can be applied to identify the sensitivity to this parameter.

6.3.11 Skin Factor

Skin damage is the most variable and unknown parameter used by the model. "Skin" in this case applies to both induced and dynamic skin effects. It is treated as a unit of pressure loss and impedes productivity at the same magnitude as would occur in a vertical well. That is, if a skin factor of 1 impedes the vertical well productivity by 20% (versus zero skin), then a skin factor of 1 will impede the horizontal productivity by 20%. The 20% productivity loss is spread equally over the well length. The model allows the user to assign a separate skin value to the horizontal and vertical wells since:

- a) It may be possible to reduce the dynamic skin effect of convergence in a horizontal well in the plane of the well;
- b) Many operators are treating horizontal drilling as a "completion" activity, and are concentrating on reducing the drilling/completions damage or induced skin effect caused by these activities.

The user should first apply the skin value identified in the vertical well production history match. Then run sensitivity cases with higher and lower skin values to identify the magnitude of skin effect on the horizontal well productivity.

6.3.12 Drive Mechanisms

1. Oil Depletion—drawdown is assumed to be proportional to remaining producible oil in place resulting in an exponential decline curve:

$$Q(t) = Q(0) \cdot \exp(-ct) \quad (6-3)$$

This model is based on the work of Giger (1983) and Joshi (1986) as shown in Figure 6-3.

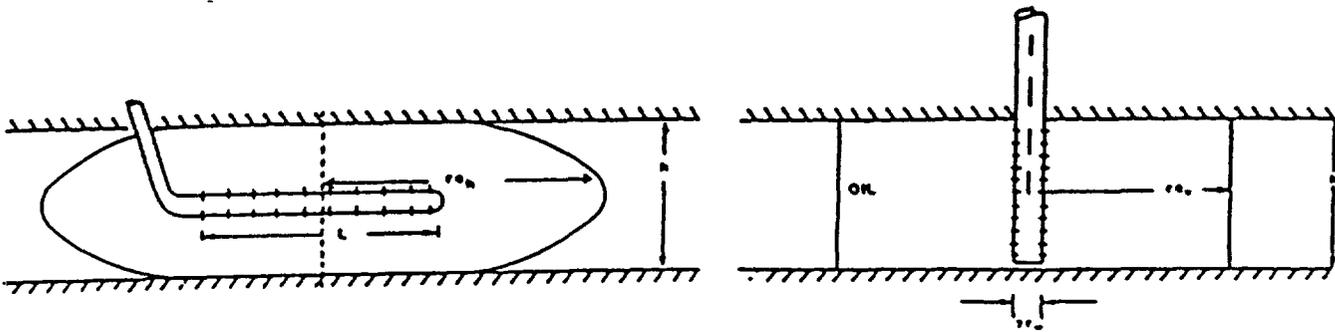


Figure 6-3. Horizontal Well Drainage Schematics (HWELL)

Joshi divided the three-dimensional problem into a pair of two-dimensional problems as shown in Figure 6-4.

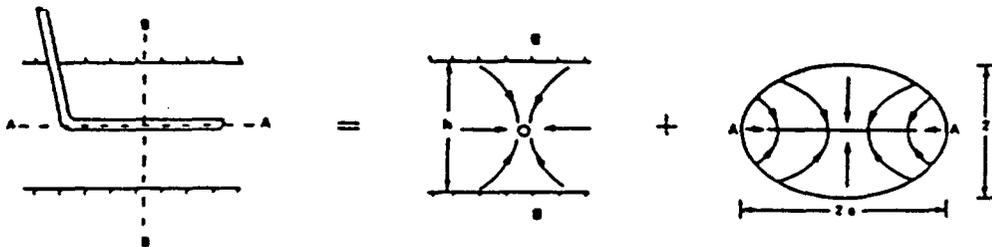


Figure 6-4. Three-Dimensional Horizontal Flow Problem (Joshi, 1986)

The flow rate q_H into this horizontal well equals (Joshi, 1986)

$$q_H = \frac{2\pi K_H H B (P_e - P_w)}{\mu \left[\ln \left[\left(1 + \left(\frac{2R_e}{L} \right)^2 \right)^{\frac{1}{2}} + \frac{2R_e}{L} \right] + \frac{\beta H}{L} \ln \left[\frac{\beta H}{2\pi R_w} \right] \right] \left[1 + \frac{S_H}{\ln \left(\frac{R_e}{R_w} \right)} \right]} \quad (6-9)$$

where

$$\beta = \sqrt{K_H/K_v}$$

K_v = Vertical Permeability (md)

K_H = Horizontal Permeability (md)

L = Horizontal Well Length (ft)

and the other variables were defined in the previous VWELL section.

Additional details on this model are presented in DEA-44 report *Horizontal Reservoir Models*.



**JAMES E #9 HORIZONTAL WELL
CABIN LAKE- DELAWARE POOL
EDDY COUNTY, NEW MEXICO**

**Production Forecasts
From 3 Reservoir Models**

<u>Year</u>	<u>DEA - 44 Maurer Eng. (BOPD)</u>	<u>Phillips Pet. Horizontal Model (BOPD)</u>	<u>Phillips Pet. Vertical Model (BOPD)</u>
1	971	904	950
2	470	392	445
3	150	222	178
4	60	144	86
5	31	71	43
6	16	36	23
7	11	18	13
8	8	9	7
9	5	5	4
 Ult. Recovery (MBO)	 DEA - 44 Maurer Eng. <u>(BOPD)</u> 628	 Phillips Pet. Horizontal Model <u>(BOPD)</u> 661	 Phillips Pet. Vertical Model <u>(BOPD)</u> 638

**BEFORE THE
OIL CONSERVATION DIVISION**

Case No. 11014 Exhibit No. 11

Submitted By:

Phillips Petroleum Company

Hearing Date: July 7, 1994



JAMES E #9 HORIZONTAL WELL
CABIN LAKE- DELAWARE POOL
EDDY COUNTY, NEW MEXICO

Production Forecasts
Horizontal Well vs. Vertical Well

<u>Year</u>	<u>DEA - 44 Maurer Eng. (BOPD)</u>	<u>Single Vertical Well (BOPD)</u>	<u>Three Vertical Wells (BOPD)</u>
1	971	187	561
2	470	132	396
3	150	88	264
4	60	58	174
5	31	38	114
6	16	27	81
7	11	16	48
8	8	11	33
9	5	8	24
Ult. Recovery (MBO)	628	206	619



JAMES E #9 HORIZONTAL WELL
CABIN LAKE-DELAWARE POOL
EDDY COUNTY, NEW MEXICO

Flow Velocity

$$\text{Velocity} = \frac{\text{Flowrate}}{\text{Cross Sectional Area}} = \frac{Q}{A}$$

$$\text{Velocity Ratio} = \frac{\text{Velocity}_{\text{VERT}}}{\text{Velocity}_{\text{HORIZ}}} = \frac{(Q/A)_{\text{VERT}}}{(Q/A)_{\text{HORIZ}}} = \frac{(Q_{\text{VERT}})(A_{\text{HORIZ}})}{(Q_{\text{HORIZ}})(A_{\text{VERT}})}$$

$$A_{\text{HORIZ}} = (\text{Circumference}) * (\text{Length})$$

$$A_{\text{VERT}} = (\text{Circumference}) * (\text{Pay Thickness})$$

$$\frac{A_{\text{HORIZ}}}{A_{\text{VERT}}} = \frac{\text{Length}}{\text{Pay}}$$

$$Q_{\text{VERTICAL}} = 300 \text{ BOPD}$$

$$Q_{\text{HORIZONTAL}} = 1600 \text{ BOPD}$$

$$\text{PAY} = 60'$$

$$\text{Length} = 2166'$$

$$\text{Velocity Ratio} = \frac{300}{1600} \times \frac{2166}{60}$$

$$\text{Velocity Ratio} = 6.8$$

BEFORE THE
OIL CONSERVATION DIVISION

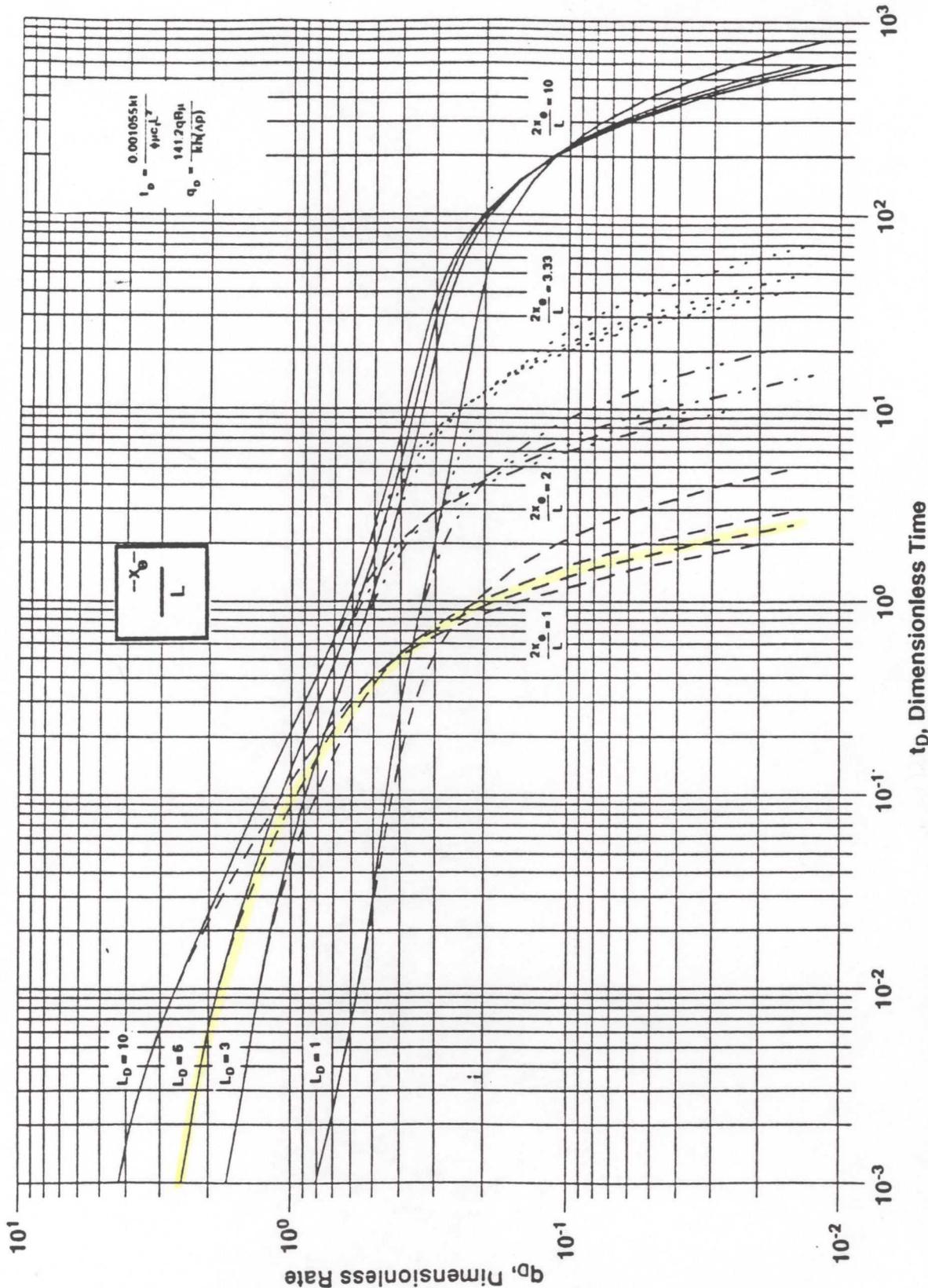
Case No. 11014 Exhibit No. 13

Submitted By:

Phillips Petroleum Company

Hearing Date: July 7, 1994

TYPE CURVE FOR A HORIZONTAL WELL IN THE CENTER OF A SQUARE DRAINAGE AREA FOR $r_{WD}^* = 0.005$



Note: This type curve is for an Exponential Decline, $b = 0$, and a constant flowing bottomhole pressure.

Also note that for a Rectangular area, $\frac{2x_e}{L} = \frac{\sqrt{A_{area}}}{L} = \frac{\sqrt{(2x_e)^2 y_e}}{L}$

BEFORE THE
OIL CONSERVATION DIVISION

Case No. 11014 Exhibit No. 14

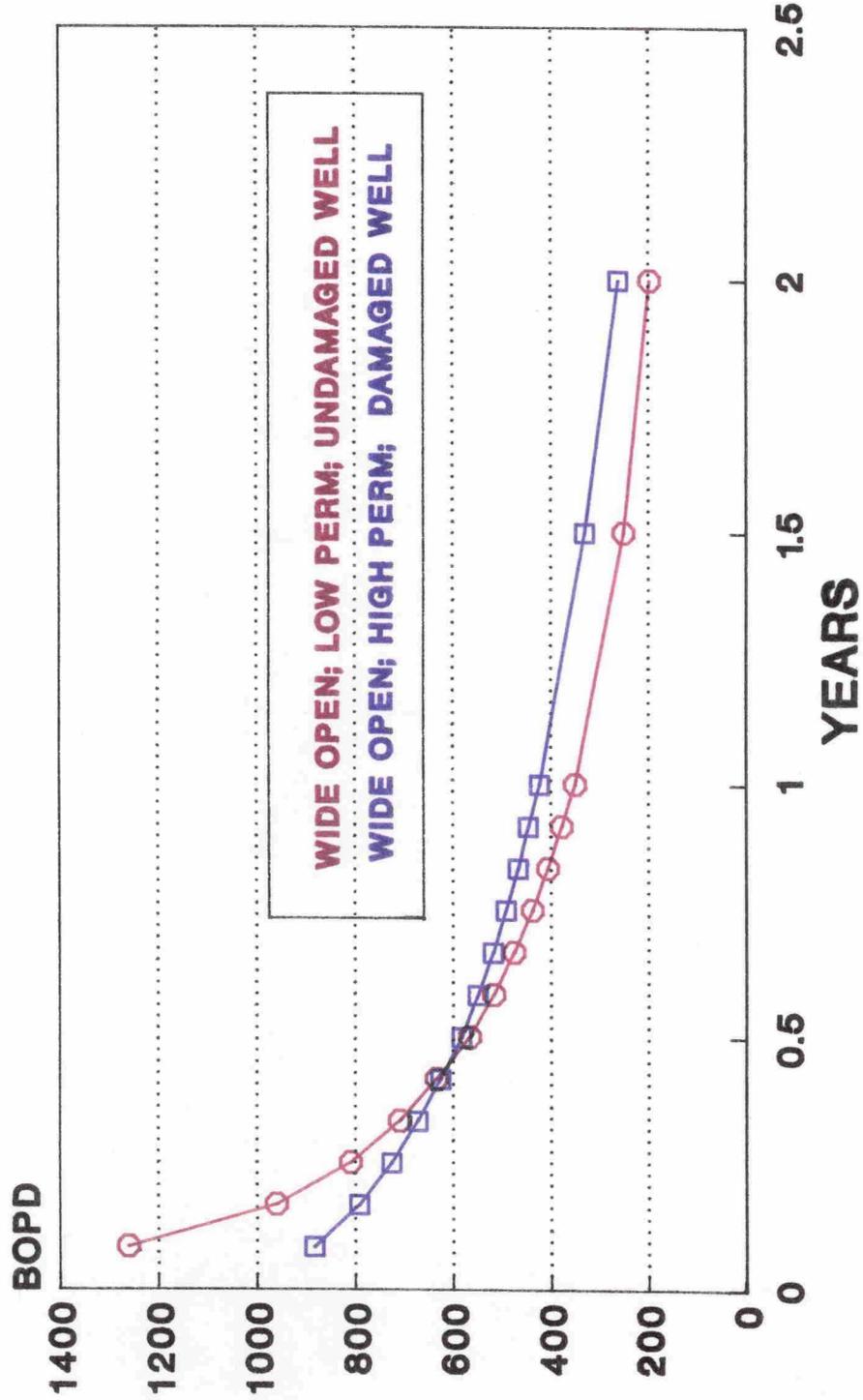
Submitted By:
Phillips Petroleum Company

Hearing Date: July 7, 1994



JAMES E #9 HORIZ. WELL

RATE - TIME ANALYSIS

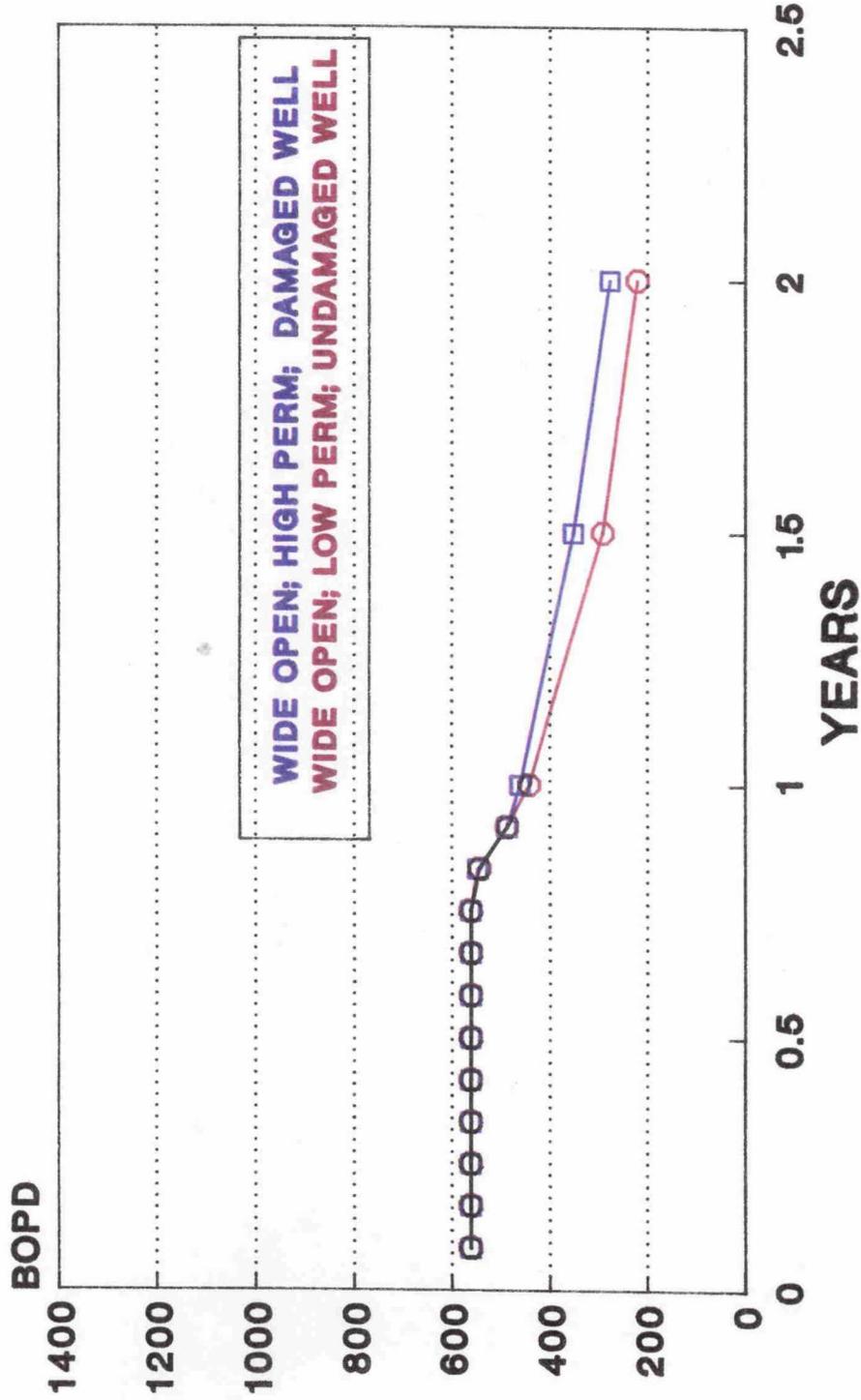


BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11014 Exhibit No. 15
Submitted By:
Phillips Petroleum Company
Hearing Date: July 7, 1994



JAMES E #9 HORIZ. WELL

RATE - TIME ANALYSIS



BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11014 Exhibit No. 16
Submitted By:
Phillips Petroleum Company
Hearing Date: July 7, 1994



JAMES E #9 HORIZONTAL WELL
CABIN LAKE- DELAWARE POOL
EDDY COUNTY, NEW MEXICO

Production Forecasts
Test Period and Over Production

<u>Month</u>	<u>Production If Test Period Is Granted (BOPD)</u>	<u>Project Allowable (BOPD)</u>	<u>Monthly Over Production (MBO)</u>	<u>Cumulative Overage (MBO)</u>
1	1600	561	31	31
2	1425	561	26	57
3	1275	561	21	78
4	1150	561	18	96
5	1050	561	15	111
6	950	561	12	123
7	850	561	8	131
8	775	561	6	137
9	700	561	4	141
10	650	561	3	144
11	625	561	2	146
12	600	561	1	147

Year One Summary

Total Production: 352 MBO
Annual Allowable: 205 MBO (561 BOPD * 365 days)
Over production: 147 MBO

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11014 Exhibit No. 17
Submitted By:
Phillips Petroleum Company
Hearing Date: July 7, 1994

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

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION DIVISION
FOR THE PURPOSE OF CONSIDERING:

CASE NO. 11014

Application of Phillips Petroleum Company
for a High/Angle Horizontal Direction
Drilling Project, Eddy County New Mexico.

CERTIFICATE OF MAILING
AND
COMPLIANCE WITH ORDER R-8054

W. THOMAS KELLAHIN, attorney in fact and authorized representative of Phillips Petroleum company, states that the notice provisions of Division Rule 1207 (Order R-8054) have been complied with, that Applicant has caused to be conducted a good faith diligent effort to find the correct addresses of all interested parties entitled to receive notice, that of the 15th day of June 1994, I caused to be mailed by certified mail return-receipt requested notice of this hearing and a copy of the application for the referenced case along with the cover letter, at least twenty days prior to the hearing set for July 7, 1994, to the parties shown in the application as evidence by the attached copies of return receipt cards, and that pursuant to Division Rule 1207, notice has been given at the correct addresses provided by such rule.



W. Thomas Kellahin

SUBSCRIBED AND SWORN to before me this 6th day of July 1994.



Notary Public

My Commission Expires: June 15, 1998

BEFORE THE
OIL CONSERVATION DIVISION

Case No. 11014 Exhibit No. 18

Submitted By:

Phillips Petroleum Company

Hearing Date: July 7, 1994

P 206 001 982



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

MR. WAYNE BAILEY
BASS ENTERPRISES PRODUCTION COMPANY
201 MAIN STREET, STE 3100
FORT WORTH, TEXAS 76102

Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, June 1991

PHILLIPS PETRO
JAMES E WELL.9
DATE: 6/15/94

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Co PHILLIPS PETRO
- Co JAMES E WELL.9
- Pri DATE:
- An does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. Addressee's Address
2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

MR. WAYNE BAILEY
BASS ENTERPRISES PRODUCTION COMPANY
201 MAIN STREET, STE. 3100
FORT WORTH, TEXAS 76102

4a. Article Number

206 001 982

4b. Service Type

- Registered
- Certified
- Express Mail
- Insured
- COD
- Return Receipt for Merchandise

7. Date of Delivery

JUN 20 1994

5. Signature (Addressee)

6. Signature (Agent)

[Handwritten Signature]

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.