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RESERVOIR CHARACTERIZATION AND PERFORMANCE PREDICTIONS FOR THE E.N. WOODS LEASE

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By
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National Petroleum Technology Office
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Tulsa, Oklahoma

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ABSTRACT

The E.N. WOODS lease of the North Cowden Field is located in Ector County (West Texas) and produces from the Grayburg formation. The field is currently operated by TRIAD ENERGY CORPORATION of Houston, Texas. In 1983, TRIAD unitized the field for waterflooding operation. Oil production reached a peak of 381,480 BBL/year in 1986 from 96,835 BBL/year in 1983. The reservoir maintained a steady production rate over a period of 10 years since waterflood began with an average of 250,000 BBL/year. The Oil rate has been in decline since 1994. As of December 1996, the unit produces approximately 100,000 barrels of oil per year.

The task of this work was to evaluate the past performance of the E.N. WOODS Unit and to forecast its future economic performance by taking into consideration the geology, petrophysics and the production history of the reservoir. The Decline Curve Analysis feature of the Appraisal of Petroleum Properties including Taxation Systems (EDAPT) software along with the Production Management Systems (PMS) software were used to evaluate the original volume of hydrocarbon in place and estimate the reserve. The Black Oil Simulator (BOAST II) was then used to model the waterflooding operation and estimate the incremental oil production attributable to the water injection. BOAST II was also used to predict future performance of the reservoir.

Waterflood study was conducted on the E.N. WOODS lease. A 3-D layered model was designed by taking into consideration the geology, petrophysics and production history of the unit. A decline curve analysis was performed based on the production data of the field. The original oil in place was estimated to be 31.4 million barrels and the reserve estimate as of January 1997 was 27.5 million barrels of oil. BOAST II was used to replicate past performance of the reservoir from 1970 to 1996. The model generated 3.86 million barrels of oil which was the exact amount of oil actually produced. The model also generated an average reservoir pressure of 1587 psi which was close to the actual 1500 psi.

Future performance of the unit was also performed over a period of 10 years (1997 - 2006). Three cases were simulated. Case 2 provided the best alternative to forecast the behavior of the reservoir. 5.89 million barrels of oil were recovered for 22.7 million barrels of water injected.

It was recommended that TRIAD Energy Corporation inject approximately 2.3 million barrels of water per year for 10 years in the reservoir to sustain a profitable oil recovery. Afterward the performance of the reservoir should be reevaluated. TRIAD should use the model built for this study as a surveillance tool for the unit. Future work should investigate production history prior to January 1, 1970 and the model parameters (formation saturations) must be accounted for. Overall, E.N. WOODS unit is a low permeability reservoir. Therefore, a tertiary recovery technique such as in-situ gelation should be looked into to determine its feasibility, applicability to the reservoir and the amount of recoverable oil under in-situ gelation. An economic evaluation study should be conducted to determine the feasibility and profitability of the technical recommendations.

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CHAPTER 1

INTRODUCTION

North Cowden field attracted major oil companies in 1924. Leasing was carried on slowly and without any semblance of boom. The greatest development of the field occurred during 1936 and 1937. The period began with 61 wells producing a total of 3,625 barrels of oil per day and ended with 187 wells producing 6,520 barrels per day. During the first half of 1938 twenty four wells were completed, and the daily field potential raised to 128,177 barrels of oil per day. On July 1, 1938, there were 208 producers within the designated bounds of the North Cowden field. The wells drilled subsequently in Secs. 25 and 36, Blk.43, T-1-N, and Sec. 1, Blk.43, T-1-S, penetrated only two of the four zones present farther west; however, in general their potentials were twice that of the field average (ref.-7). In July 1933, a study of the bottom-hole pressures was conducted. Two wells, 3/4 miles apart, were tested. The average pressure was 1653 psi. The original reservoir pressure was thought to have been 1730 psi.

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The task of this work was to evaluate the past performance of the E.N. WOODS Unit and to forecast its future economic performance by taking into consideration the geology, petrophysics and the production history of the reservoir.

The Decline Curve Analysis feature of the Appraisal of Petroleum Properties including Taxation Systems (EDAPT) software along with the Production Management Systems (PMS) software were used to evaluate the original volume of hydrocarbon in place and estimate the reserve. The Black Oil Simulator (BOAST II) was then used to model the waterflooding operation and estimate the incremental oil production attributable to the water injection. BOAST II was also used to predict future performance of the reservoir.

CHAPTER 2

GEOLOGY REVIEW

2.1 RESERVOIR DESCRIPTION

Geographically, the North Cowden field is on the transition between the Llano Estacado at the north and the Edwards Plateau at the south. It is in north-central Ector County, Texas, 18 miles north and west of Odessa, and 30 miles northwest of Midland. Figure 1 shows the regional position of North Cowden field (ref-7).

Geologically, the North Cowden field is on the eastern margin of the central Basin platform. The sequence of formations in the North Cowden field is typical, except for differences due to local and regional thinning and thickening of the beds, of all fields on the eastern margin of the Central Basin platform. The producing structure is an anticline 7.5 miles long. Oil is obtained from sands and limestone of the lower Whitehorse age. The oil production is prolific on the east, or basinward, flank of the structure. A gas cap exits in the first pay zone on the higher parts of the structure.

All production of oil and gas in the North Cowden field is from the Grayburg formation of the whitehorse group. The Whitehorse group consists of five formations named, in descending order, the Tansill formation, the Yates sand, the seven Rivers formation, the Queen sand, and the Grayburg formation. There are four sands in the first 400 ft of the Grayburg which have been taken as criteria for the designation of the four producing "pays." The third "pay" is more uniformly consistent in thickness throughout the field, and it is likewise the most important economically. The interval from the top of the limestone to the first "pay" ranges in thickness from 30 to 55 feet. Throughout the field there are local variations in this section. The four producing beds are made of very fine-grained angular clear quartz sand showing varying degree of calcareous

cementation. The "pay" zones are separated by white and buff, dense to finely crystalline, oolitic and anhydritic magnesian limestone interbedded with fine-grained angular red and gray calcareous cemented sands and thin laminations of green and maroon bentonitic shales. The "pays" are approximately 10 to 40 ft thick (ref-7).

2.2 STRUCTURAL HISTORY

The formation of the North Cowden structure appears to have been progressive throughout the Permian period. The region was undergoing uplift during the deposition of the producing section (Grayburg). Although several channels cut into the structure from both west and east, the general alignment of areas of thin deposition indicates that the axis of this old structure was slightly east of the axis of the present limestone.

From the time of the deposition of the producing beds to the present, the axis of the North Cowden fold has shifted considerably. In the epoch represented by the sedimentation from the end of the Grayburg time to the end of Yates time, the axis was about 1/4 mile east of its present position, and in Salado time about 1.25 miles east. The orientation of the axis has remained approximately the same from Graburg to the present.

Uplift appears to have occurred somewhat erratically. On the east flank and southern extremity of the structure the most intense folding was confined to the Whitehorse and Salado time, with a relatively slight amount of post-Rustler movement indicated. On the west flank, however, about one-third of the movement since limestone deposition seems to have occurred in Rustler and post-Rustler time. Figure 2 is a stratigraphic sequence of the North Cowden field (ref-4).

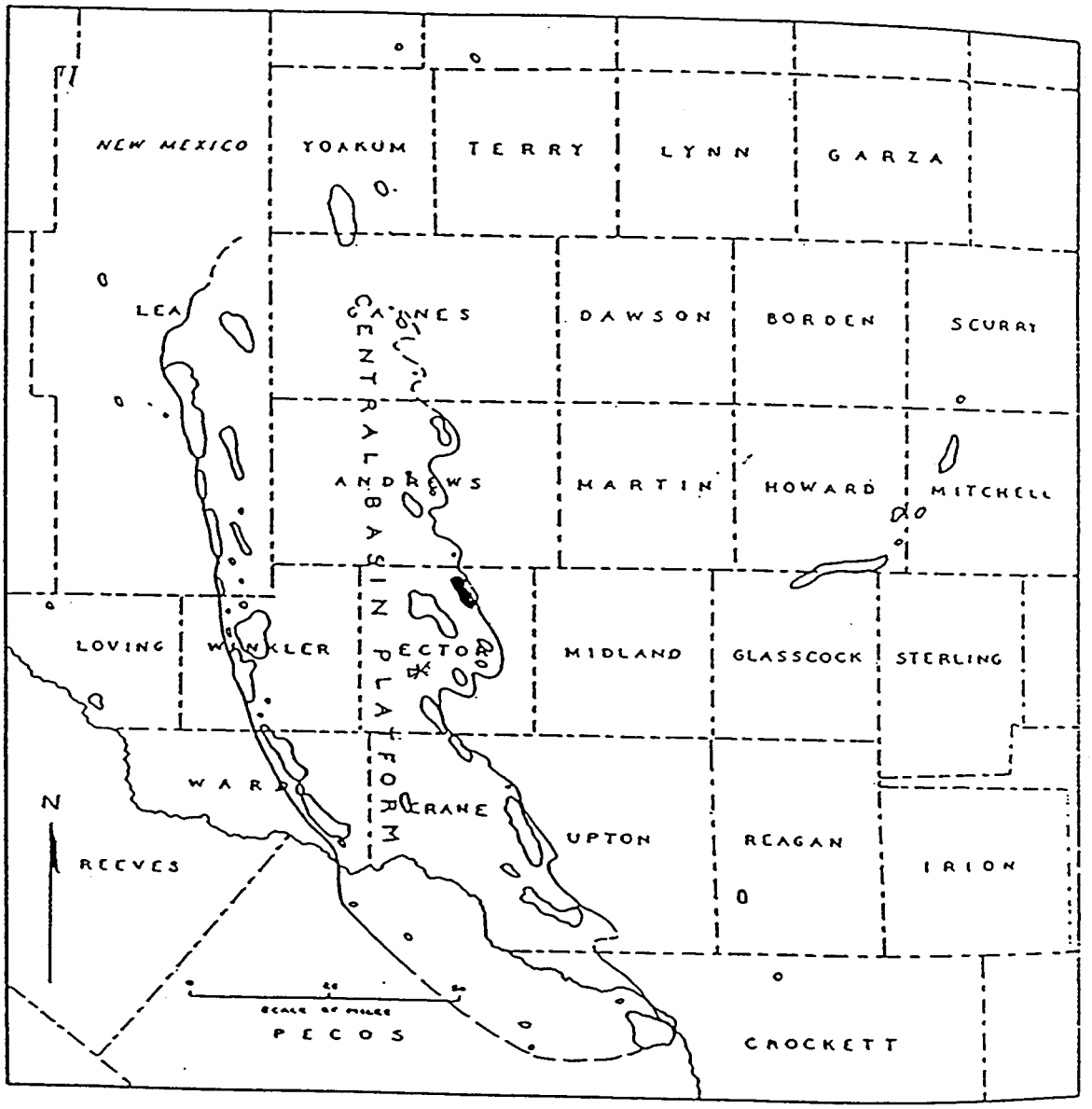


Figure 1 - Regional position of North Cowden field

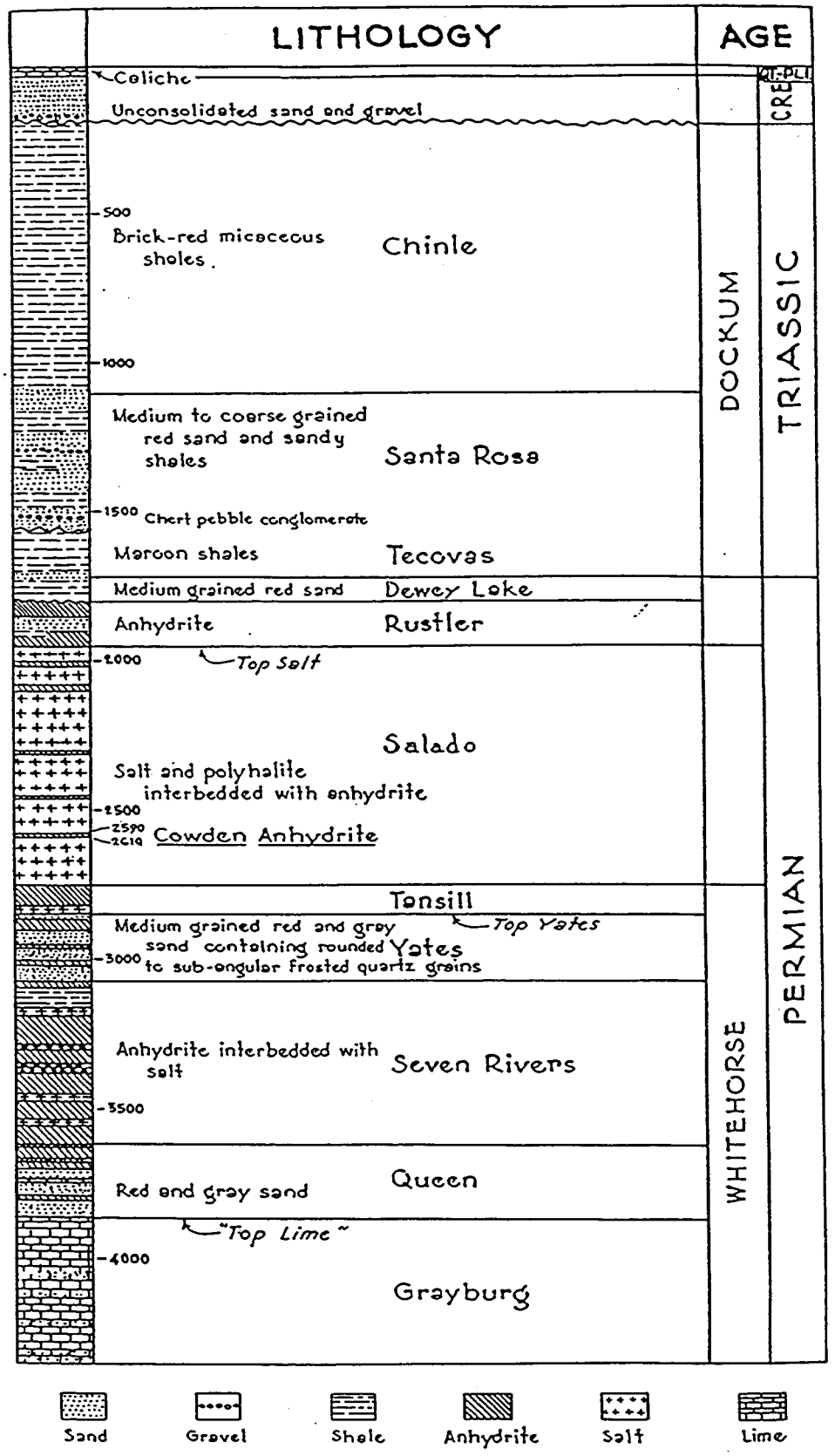


Figure 2 - Stratigraphic Sequence of the North Cowden field

CHAPTER 3

RESERVOIR SIMULATION REVIEW

3.1 BACKGROUND

Reservoir simulation of a petroleum or natural gas reservoir enable the engineer to examine and evaluate the physical and economic consequences of various alternative production policies. Reservoir simulation has evolved as a powerful prediction tool for the modern-day reservoir engineer. The engineer commonly uses a reservoir model to simulate past reservoir history. Once a reasonable match is obtained, the engineer may then move forward to predict the outcome of various recovery applications induced into the reservoir.

A reservoir is usually described with the depth, thickness and boundaries. A reservoir description can be successfully completed by using all available data and expertise to formulate 3D descriptions of porosity and permeability. This often results in a set of maps of porosity, permeability, thickness, and structural elevation. The entire reservoir or individual reservoir units can be mapped (ref-2).

3.2 TYPES OF RESERVOIR SIMULATORS

Today, the most widely used types of reservoir simulators are black oil, compositional, thermal, and chemical flood (ref-11). Each of these simulators incorporates the four basic recovery techniques. The four major mechanisms of hydrocarbon recovery are fluid expansion, displacement, gravity drainage and capillary imbibition. Recovery by fluid expansion occurs with a decline in pressure. As the pressure drops, the fluid expands and subsequently flows through the porous media. Displacement methods include moving the in-situ fluid with either a gas or a water. Gravity drainage is caused

by density contrasts between either water/oil or gas/oil. That is, oil move upward through water if the oil's density is lower than that of the water. Finally, recovery by imbibition generally occurs during normal to the flow direction, and occurs in strata with large permeability variations.

3.2.1 Black Oil Simulators

Black oil simulators account for all four recovery mechanisms, and are utilized for natural depletion and pressure maintenance (Waterflooding) operations. This isothermal model applies to reservoirs containing immiscible water, oil and gas phases with a solubility of the gas component in the oil phase. There also exists a simple pressure dependent fluid property relationship. Major model assumptions include constant oil composition, no volatility of the oil in the gas phase, no solubility of the oil and gas in the water phase, and no volatility of the water in the gas and oil phases. There are three component phases recognized in a black oil simulator, and therefore, the number of equations per grid block is three.

3.2.2 Compositional Simulators

In addition to the four mobilization mechanisms, compositional models simulate the mobilization of oil by single contact or multiple contact miscibility, oil swelling, or by viscosity reduction via gas injection. This implements a four phase component into the simulator, often termed a miscibility component, and the equations per grid block becomes four.

3.2.3 Thermal Simulators

Thermal models are used for steam injection or in situ combustion. These processes are normally carried out in heavy oil reservoirs, such as most of the California oil reservoirs. The main goal is to increase the mobility of the oil by either reducing the oil

viscosity, cracking of the oil phase, or condensation of intermediate hydrocarbons into the gas phase.

3.2.4 Chemical Flood Simulators

Chemical flood models include polymer, caustic and surfactant. These models deal with complicated rock-fluid interactions. More specifically, polymer flood models incorporate oil-water mobility changes, effective water permeability alterations, and water viscosity increases. Oil recovery processes in caustic models include wettability alteration, lowering of the oil-water interfacial tension, and emulsification. Surfactant flooding is modeled by reduction of the oil-water interfacial tension.

CHAPTER 4

BOAST II SIMULATOR MODEL

4.1 BACKGROUND

The model used in this study was BOAST II computer model (ref-5). BOAST II is a PC-based, Black Oil Applied Simulation Tool used commonly to perform evaluation and design work in modern petroleum reservoir engineering. In 1982, the U.S. Department of Energy released the original black oil model called BOAST.

BOAST was developed to simulate three-phase, isothermal and darcy flow of fluids of constant composition. The physical properties of the three fluid phases were assumed to depend only on pressure. As it turns out, these assumptions were good for a large percentage of the world's oil and gas reservoirs.

The selection of BOAST II for simulating the behavior of the E. N. WOOD lease was governed by the following considerations:

- Availability and capabilities of the model: BOAST II is a black oil simulator. It accounts for all four recovery mechanisms and is suitable for pressure maintenance operations such as waterflooding.
- Production history of the reservoir: the reservoir is currently being waterflooded following many years of production. Thus, the presence of three mobile phases has to be considered.
- Geological characteristics of the reservoir: the reservoir comprises layers of sand and limestone over a gross thickness of 465 feet and can be modeled using BOAST II.

4.2 SIMULATOR FEATURES

Released in 1987, BOAST II, a modified version of BOAST, was designed to yield additional flexibility and to overcome some of the limitations of the original version. BOAST II is a three-dimensional, three-phase (oil, water, gas) simulator based on continuity equations and Darcy's law as a momentum balance for each phase. BOAST II is designed for the simulation of primary depletion, pressure maintenance by water and/or gas injection, and basic secondary recovery operations such as waterflooding. It can simulate oil and gas recovery by fluid expansion, displacement, gravity drainage and capillary imbibition mechanisms

The black oil simulator mass conservation equations can be written as follow:

Oil

$$-\nabla.\frac{\overset{\varpi}{V}_o}{B_o}\frac{Q_o}{\rho_{osc}}=\frac{\partial}{\partial t}\left(\phi\frac{S_o}{B_o}\right) \qquad \text{eq - 1}$$

Water

$$-\nabla.\frac{\overset{\varpi}{V}_w}{B_w}\frac{Q_w}{\rho_{wsc}}=\frac{\partial}{\partial t}\left(\phi\frac{S_w}{B_w}\right) \qquad \text{eq - 2}$$

Gas

$$-\nabla.\left[\frac{\overset{\varpi}{V}_g}{B_g}+\frac{R_{so}}{B_o}\overset{\varpi}{V}_o+\frac{R_{sw}}{B_w}\overset{\varpi}{V}_w\right]\frac{Q_g}{\rho_{gsc}}=\frac{\partial}{\partial t}\left\{\phi\left[\frac{S_g}{B_g}+\frac{R_{so}}{B_o}S_o+\frac{R_{sw}}{B_w}S_w\right]\right\} \qquad \text{eq - 3}$$

where

B_i = formation volume factor of phase i

Q_i = mass flow rate per unit reservoir volume phase i

R_{so} = solubility of gas in oil

R_{sw} = solubility of gas in water

S_i = saturation of phase i

V_i = Darcy velocity of phase i

ρ_{isc} = density of phase i at standard conditions

ϕ = porosity

BOAST II assumes that fluid and rock properties are single-valued functions of pressure only. No mass transfer between different phases is allowed. The finite-difference matrix representing the fluid flow within reservoir grid block is solved implicitly for pressure. The saturation is then solved explicitly. This numerical technique used to solve pressure differential equations is called the implicit pressure-explicit saturation (IMPES) method. The boundary conditions include a no-flow boundary of the reservoir and production/injection well used as a source/sink incorporated through the well model. Moreover, it has the option for both direct and iterative solution techniques to solve systems of algebraic equations. Other features included in BOAST II are:

- Specifications of rate or pressure constraints on well performance
- Multiple rock and PVT regions may be defined
- Bubble point tracking scheme
- Automatic time step control method
- Material balance check on solution stability
- User controlled output option (final summary information line printer plot)

CHAPTER 5

WATERFLOOD STUDY

5.1 DATA ACQUISITION AND ANALYSIS

The input data file needed to run the BOAST II model was derived from information provided by the operator TRIAD ENERGY CORPORATION and Petroleum Information (PI). The information included production history (oil, gas, water) as well as logs for well P-4, P-6 and P-7. Petrophysical data for well # 15 and an average well were also provided. Only a current average reservoir pressure of 1500 psi was given by TRIAD. There was inconsistency and insufficient accuracy on the production and injection volumes from both TRIAD and Petroleum Information. However, production history provided by PI was more complete because it included oil, gas and water data for each well. It also included the completion date for each well. Logs and core data were used to obtain porosity and permeability values, water and oil saturations for the model. Based upon the data obtained from TRIAD and PI, and due to the lack of production and field development history prior to January 1, 1970, it was assumed that January 1,1970 was the date production started in the E.N. WOODS lease. This study was conducted to be consistent with the above mentioned starting date and available data.

5.2 RESERVOIR DEVELOPMENT AND OPTIMIZATION

The primary recovery of the unit was up to December 1975. Wells P-1, P-2A and P-4 were producing during that period. Beginning of 1976, 8 lease line injection wells (I-70, I-71, I-72, I-75, I-76, I-104, I-204, I-317) were completed to assure pressure maintenance of the reservoir. Wells P-3 and P-5 were put in production at that time. Well P-6 was completed in 1976 followed by producers P-7 and P-8 in 1982.

In 1983, four interior injectors were drilled on the Woods lease, increasing injection substantially and resulting in an impressive five-fold oil production increase over the followed several years. An infill producer (P-13) was drilled in 1984 and two additional injectors (I-329, I-330) were added on the south lease line in 1990. An interior injector (I-14) was added in 1991, an infill producer (P-15) was drilled in 1992, and three infill producers (P-16, P-17, P-18) were drilled in 1993. In 1995, Well P-17 was converted to an injector I-17. Currently, the WOODS unit comprises 12 producers and 16 injectors. The structural isopach map is illustrated in Figure 3.

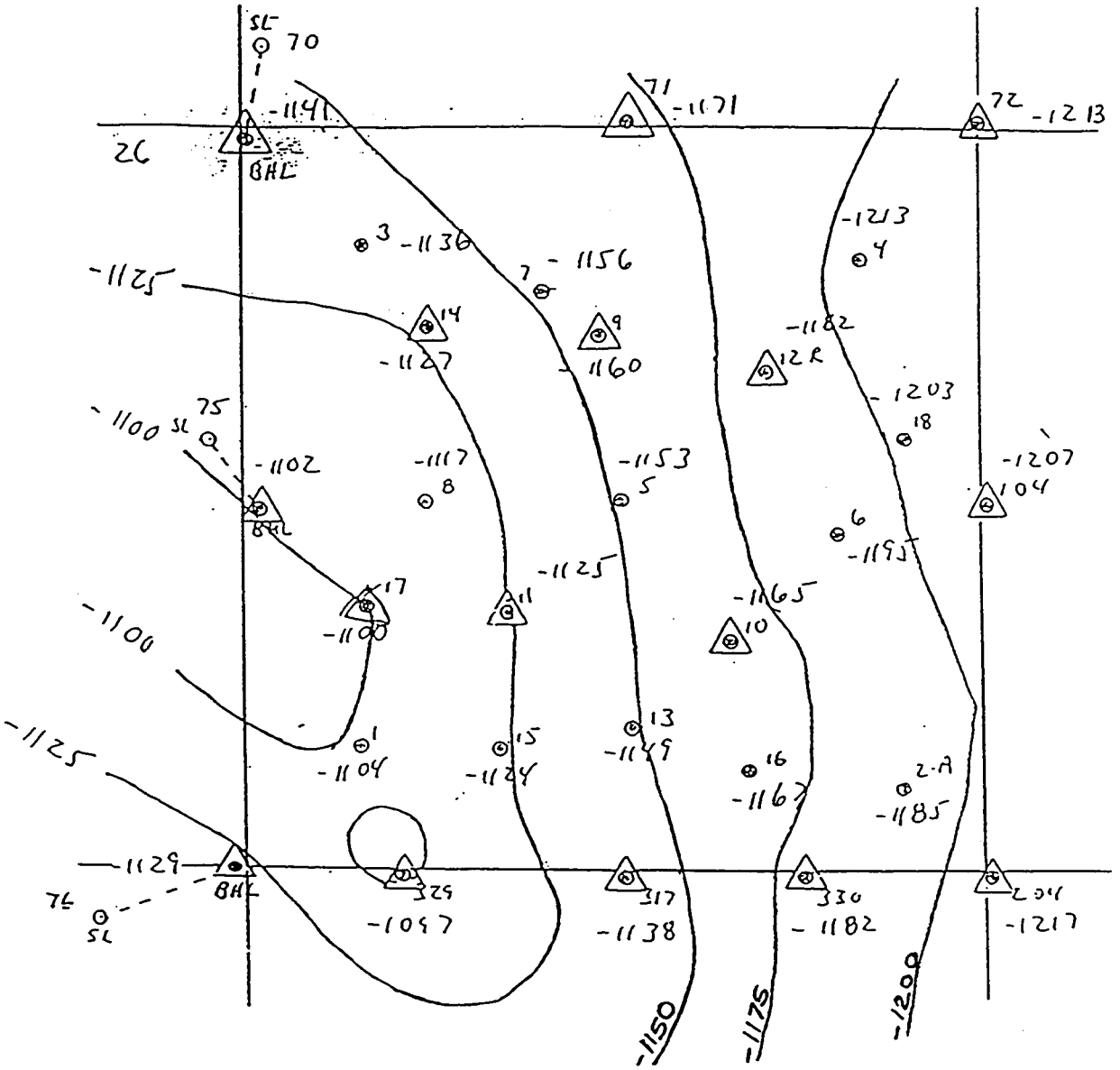
5.3 RESERVOIR CHARACTERIZATION

The petrophysical data, well logs and isopach maps were used to characterize the reservoir. The top of the grayburg reservoir was about 1100 ft below sea level. The depth of the reservoir ranged from 4185 ft to 4650 ft for a gross thickness of 465 ft.

The reservoir was divided into 7 layers. All layers were producers. The first layer (D1) was a 68 ft thick predominantly light gray, anhydritic, and slightly sandy magnesian limestone. The second bed (S1) was fine-grained angular quartz sand with a thickness of 10 ft. The next layer (D2) was another finely crystalline magnesian limestone of 202 feet thick. Just below the base of D2 was an interval 25 feet thick of sand (S2). The following layer (D3) was 60 feet thick magnesian limestone. Between D3 and the seventh layer was a predominantly sandy bed with a thickness of 15 ft. The last layer (D4) in the stratum was 85 ft thick magnesian limestone. There was communication between the all producing beds. Moreover, there is a lateral continuity between layers from well to well. Figure 4 shows a northwest-southeast cross-section map of the unit.

The absolute permeability ranged from 0.1 md to 176.8 md. The average porosity was 9.8%. The initial reservoir pressure was 1800 psi. The average reservoir pressure as of December 1996 was 1500 psi. Initial water and oil saturations were 21% and 79% respectively. The average depth of the reservoir was 4400 feet. Initial oil formation

volume factor was 1.214 rbo/stbo and the solution gas-oil ratio was 468 scf/stb. The productive volume was estimated to be 64,000 acre-feet @ 4% porosity cut off which correlates to a permeability of 0.1 md



• Producing well		Injection well
Top of Grayburg Porosity	E.N. WOODS LEASE	North Cowden Field
Ector County, Texas	1" 600'	Sec. 25, BIK. 43, T-1-N, T&PRR Co. SUR.

Figure 3 - Structural Isopach Map of E.N. WOODS Unit

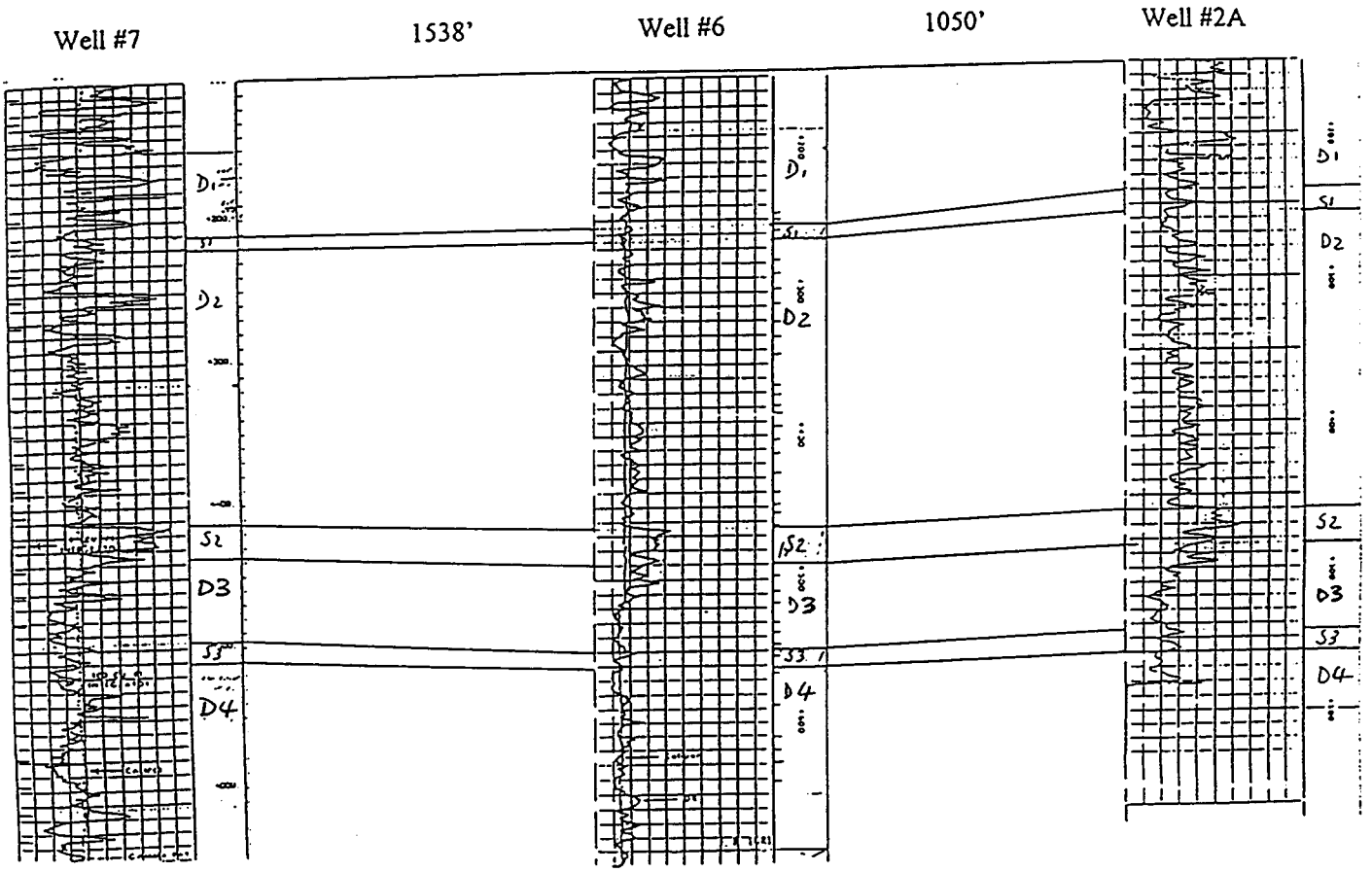


Figure 4 - Northwest - Southeast Cross section Map of E.N. WOODS Unit

5.4 RESERVOIR MODEL DESIGN

5.4.1 Grid Dimensions

After review of the geology and well logs it was determined that E.N. WOODS unit could be best described through the use of a 3 dimensional 7 layered model. Therefore, a 11x10x7 model system was designed. The thickness for each layer was obtained from well logs. The top layer elevation values for the reservoir were derived from the structural isopach map. The elevations for the remaining layers were computed within the model from the uppermost layer's elevation and the subsequent layers thicknesses.

The model comprised of 11 grid blocks in the X direction, 10 grid block in the Y direction and 7 communicating layers in the Z direction. The model was partitioned such that only one well, including the lease line injection wells, occupied a grid block. Layers D1, D2, D3 and D4 were separated by 3 zones S1, S2 and S3. The dimensions of grid blocks vary from 113 feet to 375 feet in both X and Y directions. Net "pay" for layers D1, D2, D3 and D4 were 20, 195, 60 and 79 feet respectively. The net thicknesses of the separating beds S1, S2 and S3 were 10, 22 and 14 feet respectively. Areal view and 3 dimensional model of the reservoir are given in figures 5 and 6 respectively. A gradient of 0.35 psi/ft was used to calculated the initial pressure for each layer. Initial pressure ranged from 1800 psi for layer 1 to 1881 psi for layer 7. Moreover, Pressure, oil and water saturations were specified for each grid block.

5.4.2 Relative Permeability Distribution

Three phase relative permeability calculation was used in the model. Oil, gas and water relative permeabililities were adjusted during the history matching process. Upon completion of the history matching, the final values for krow, krw, krog and krg were

used in the prediction model. The three phase relative permeability calculated by the model was given by Stone's equation (ref-13)

$$K_{ro3}=\frac{(K_{row}+K_{rw})(K_{rog}+K_{rg})}{K^{*}_{row}}(K_{rw}+K_{rg}) \qquad \text{eq - 4}$$

where

K_{row} = oil relative permeability for water-oil system

K_{rog} = oil relative permeability for gas-oil system

K^{*}_{row} = oil relative permeability for ware-oil system evaluated at the oil saturation corresponding to irreducible water saturation

Figures 7 and 8 illustrate oil - water and oil - gas relative permeability curves.

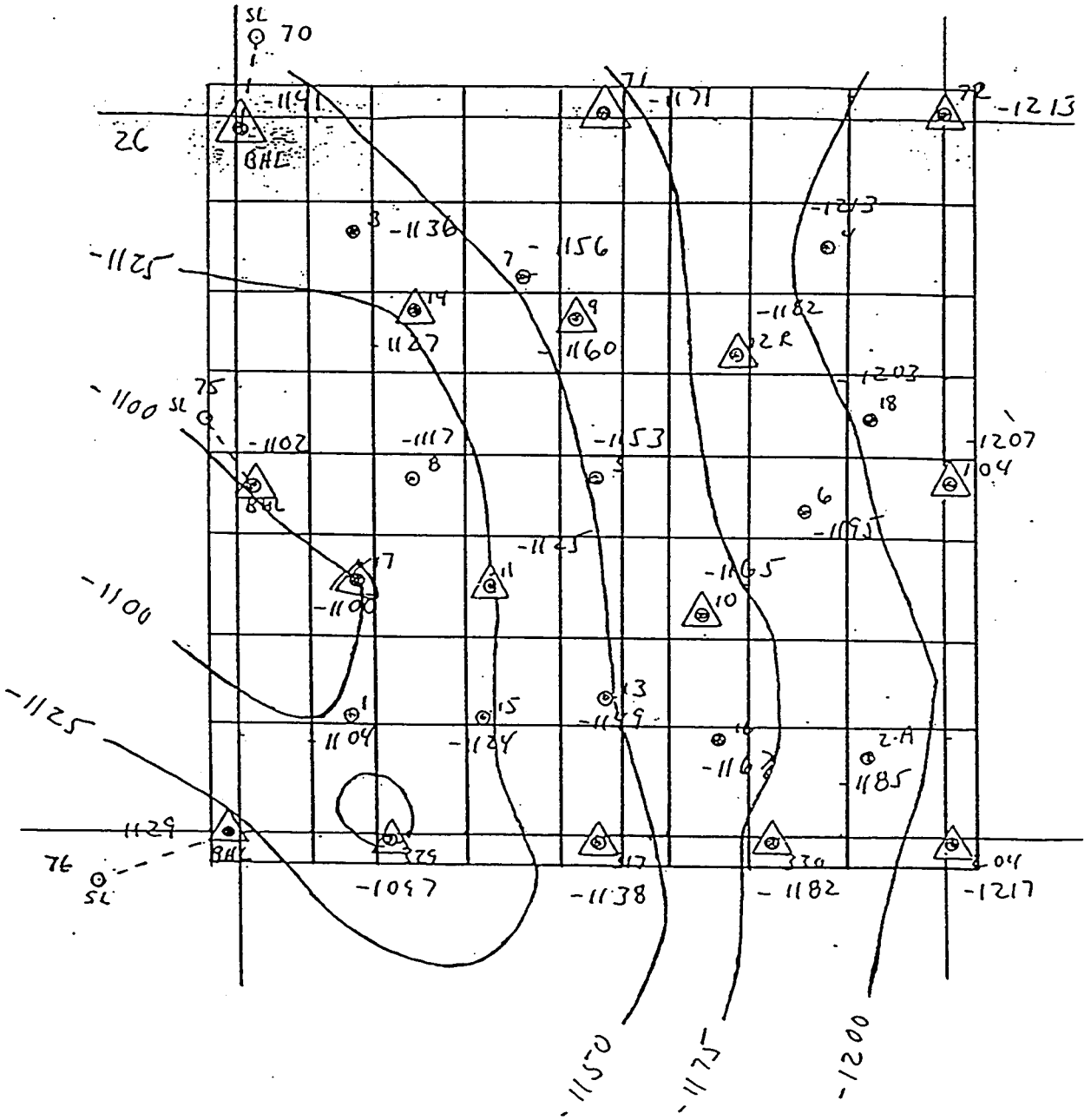
5.4.3 GOR/WOR Constraints

Maximum gas/oil and water/oil ratio (GORMAX, WORMAX respectively) were inputted in the model and applied to every oil production well. GORMAX and WORMAX were set to 500,000 SCF/STB and 100 STB/STB respectively.

GOR for a well is defined as total gas production divided by total oil production for all active well completion intervals. If GOR for the well exceeds GORMAX, then the completion interval (layer) with the highest GOR will be shut-in. If more than one layer has the same maximum GOR, the Shallowest layer will be shut-in first. The procedure is repeated until GOR is less than GORMAX or until the well is shut-in.

WOR is defined as the total water production divided by total oil production for all active well completion intervals. If WOR for the well exceeds WORMAX, then the

completion interval (layer) with the highest WOR will be shut-in. If more than one layer has the same maximum WOR, the deepest layer will be shut-in first. The procedure is repeated until WOR is less than WORMAX or until the well is shut-in (ref-5).



• Producing Well
Injection Well

1" = 600'

Figure 5 - Areal View of the Reservoir Model

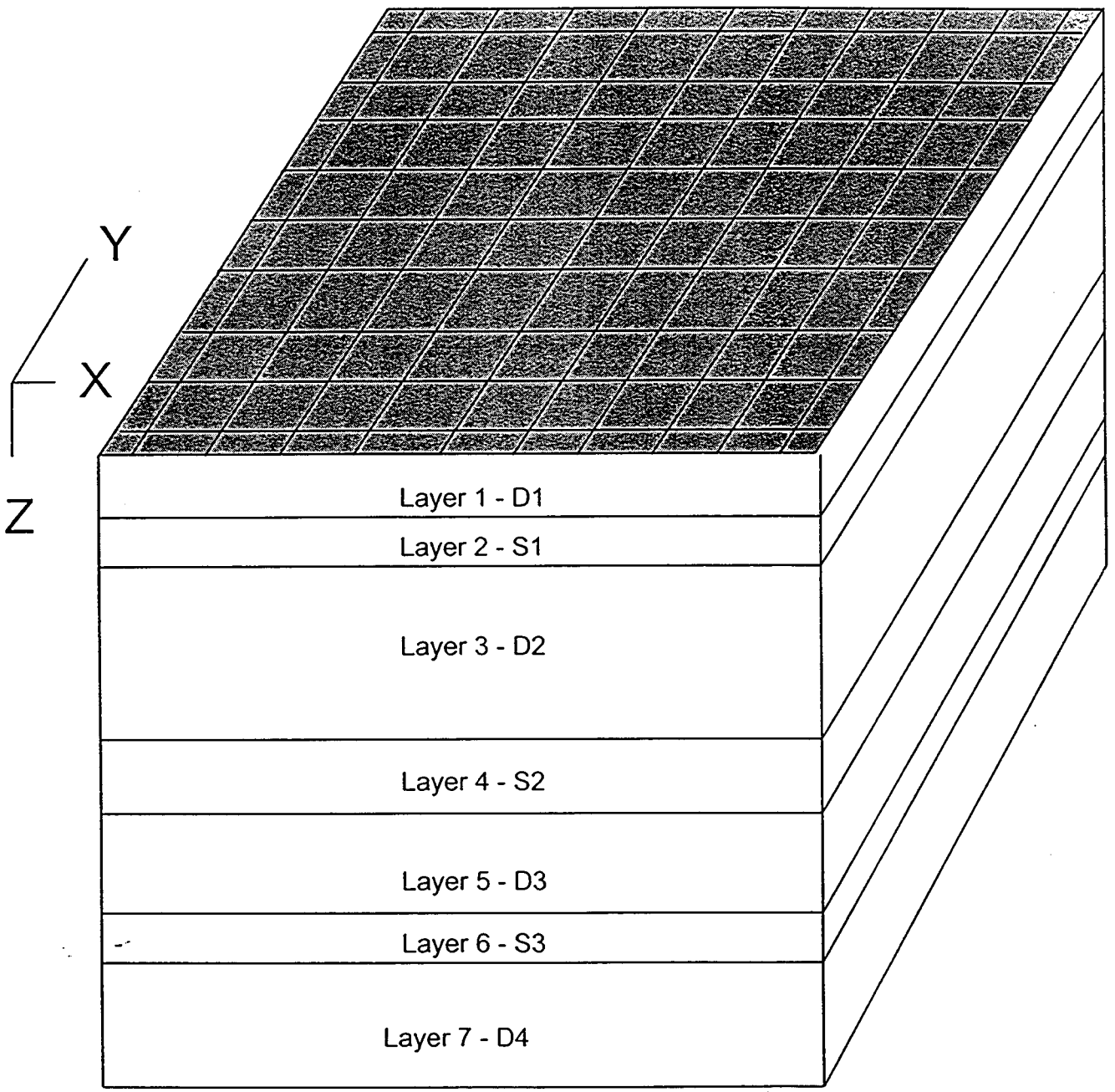


Figure 6 - 3 Dimensional Model of the Reservoir

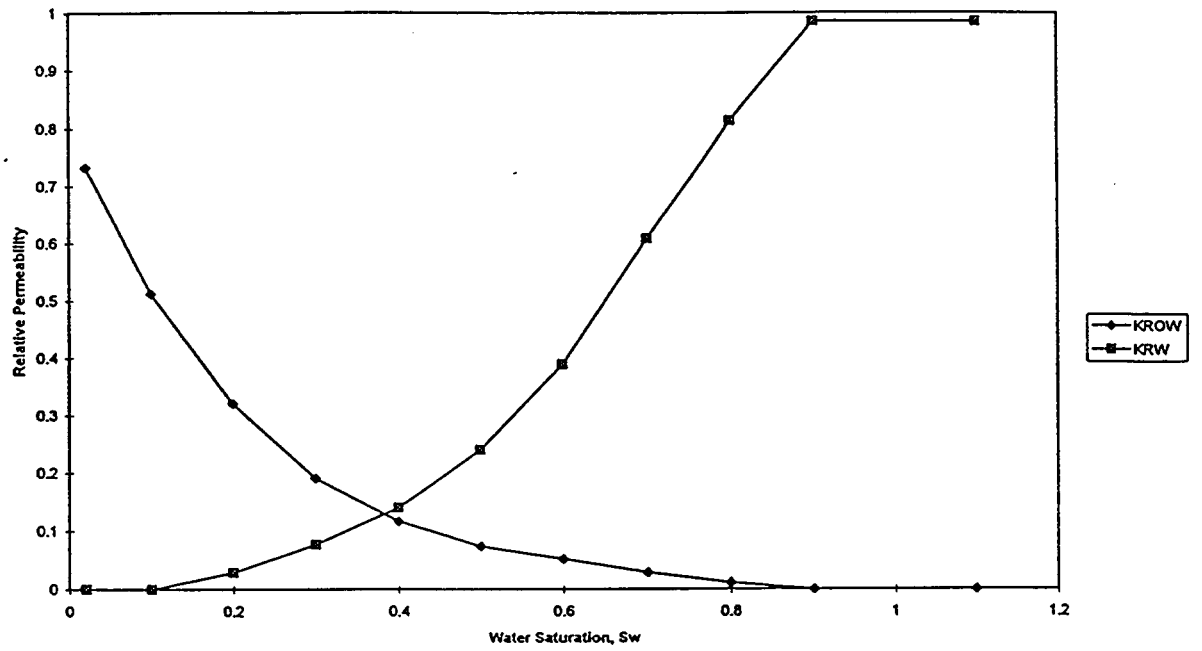


Figure 7 - Oil and Water Relative Permeability Curves

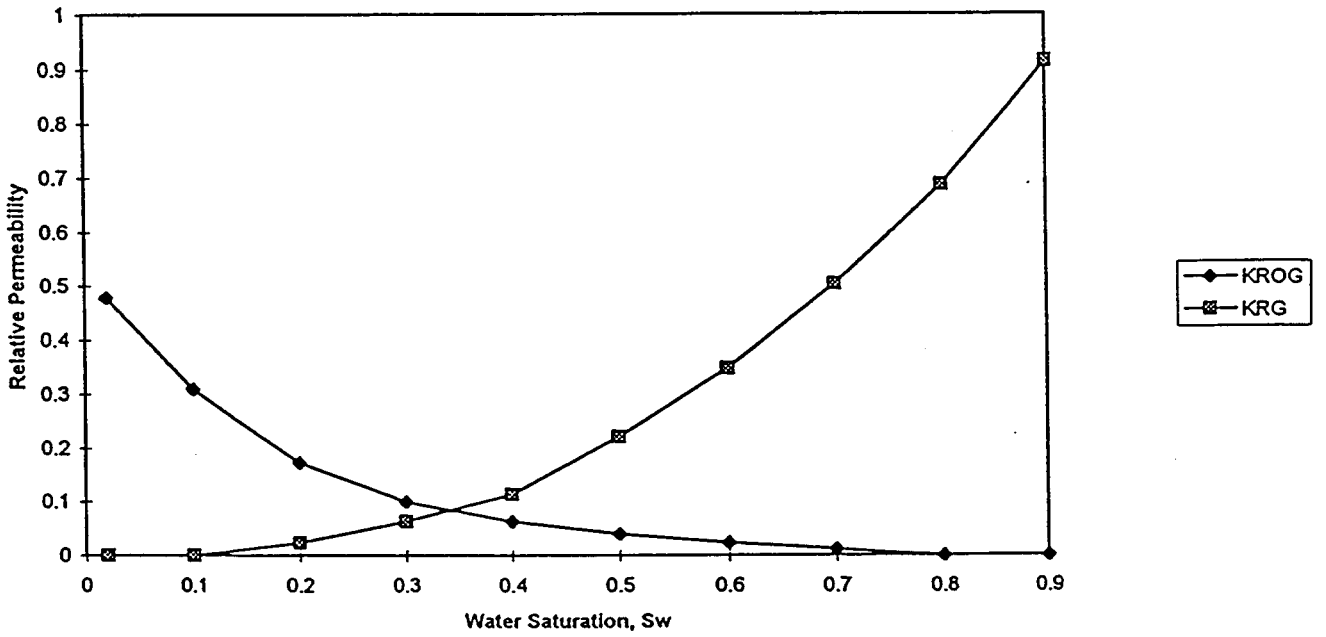


Figure 8 - Oil and Gas Relative Permeability Curves

5.4.4 Productivity Index Calculation

A value of the layer flow index PID was estimated from the formula derived by Peaceman (ref-10)

$$PID_k = \left[\frac{0.00708Kh}{ln\left(\frac{0.121\Delta L}{r_w}\right)+S} \right]_k \qquad \text{eq - 5}$$

where $\Delta L = \Delta X$ for a square well block, and $\Delta L = \sqrt{\Delta X \Delta Y}$ for a rectangular well block. PID is calculated for each producing layer (k) in the reservoir.

K = air permeability of layer k, md

h = thickness of layer k, feet

r_w = wellbore radius, feet

S = dimensionless skin factor

Equation 5 was used to compute an initial estimate of PID. The values were then adjusted until the model computed oil rates match observed oil rates.

5.4.5 Rate Constraints

Oil produced was specified as a rate constraint for all active wells. Assuming the well may be completed in K layers, the production rates of layer k for a specified oil rate are (ref-5):

Oil

$$Q_{ok}=Q_o=\frac{\left[(PID)\lambda_o/B_o\right]_k}{\sum_{k=1}^{K}\left[(PID)\lambda_o/B_o\right]_k} \qquad \text{eq - 6}$$

Water

$$Q_{wk}=Q_{ok}\left(\frac{\lambda_w/B_w}{\lambda_o/B_o}\right)_k \qquad \text{eq - 7}$$

Gas

$$Q_{gk}=\left(\frac{\lambda_g/B_g}{\lambda_o/B_o}\right)_k Q_{ok}+(R_{so})_k Q_{ok}+(R_{sw})_k Q_{wk} \qquad \text{eq - 8}$$

The total water injection rate (Q_w) was specified for each injection well. Well injectivity indexes (WI) were also specified for each layer. Equation 5 was used to calculate WI. The model used equation 9 to compute internally the injection rate for each layer.

$$Q_{wk}=Q_w\frac{\left[WI(\lambda_o+\lambda_w+\lambda_g)\right]_k}{\sum_{k=1}^{K}\left[WI(\lambda_o+\lambda_w+\lambda_g)\right]_k} \qquad \text{eq - 9}$$

5.4.6 Recurrent data

In order to obtain a realistic match of the reservoir performance history, the recurrent data was set to generate output results every year from 1970 to 1996. Wells were entered in the model according to their completion date, and their starting date of production or injection. Any change in the status of well (flow rate, injection etc.) was accounted for in the recurrent data. The layout of the recurrent data followed the development and optimization plan of the unit.

CHAPTER 6

DISCUSSION OF RESULTS

5.1 RESERVE ESTIMATE

The production data obtained from Petroleum Information was inputted in EDAPT and PMS. The production started to decline in 1994 about 10 years from the beginning of water injection within the unit. There was no production history data available prior to January 1, 1970. Therefore, that date was used as the day production started in order to obtain a practical decline curve and a good approximation of the reserve and original oil in place (OOIP). Equation 10 (ref-1) was used to estimate the reserve as of January 1st 1997 to the end of the unit life and the cumulative oil production at time t. Figure 9 shows the oil production history of the E.N. WOODS unit.

$$N_p = \frac{q_i^n}{(1-n)D_i}\left(q_i^{1-n} - q^{1-n}\right) \qquad \text{eq - 10}$$

where

N_p = cumulative oil production at time t, barrels

D_i = nominal decline rate at initial conditions

n = fractional power of the production rate

q = oil production at time t, BLS/time

q_i = initial oil production rate, BLS/time

The monthly production data provided by Petroleum Information fits an hyperbolic decline with a nominal decline rate of 2.46%, a fractional power of 0.83 and an initial oil production rate of 19,200 B/M. The reserve estimated as of January 1st 1997 was 27.5 million barrels of oil and the original oil in place was 31.4 million barrels. Figure 10

shows the oil decline curve of the unit. To verify the integrity of the decline curve analysis, the original oil in place was also calculated volumetrically to be 31.6 million barrels for a productive volume of 64,000 ft @ 4% porosity cut off. The decline curve validated the model. BOAST II computed OOIP by material balance. Those results for OOIP were in agreement.

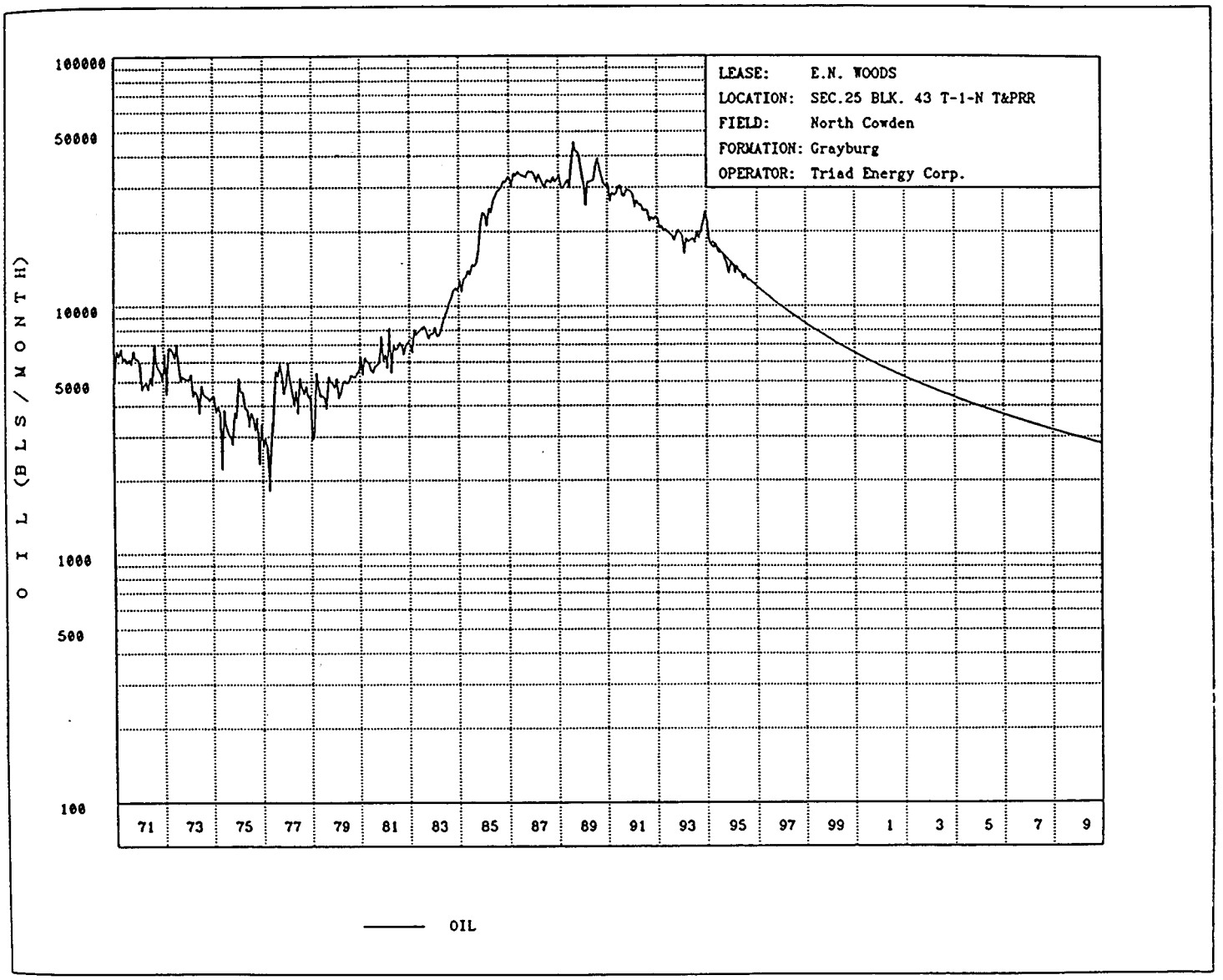


Figure 9 - Production History of the E.N. WOODS Unit

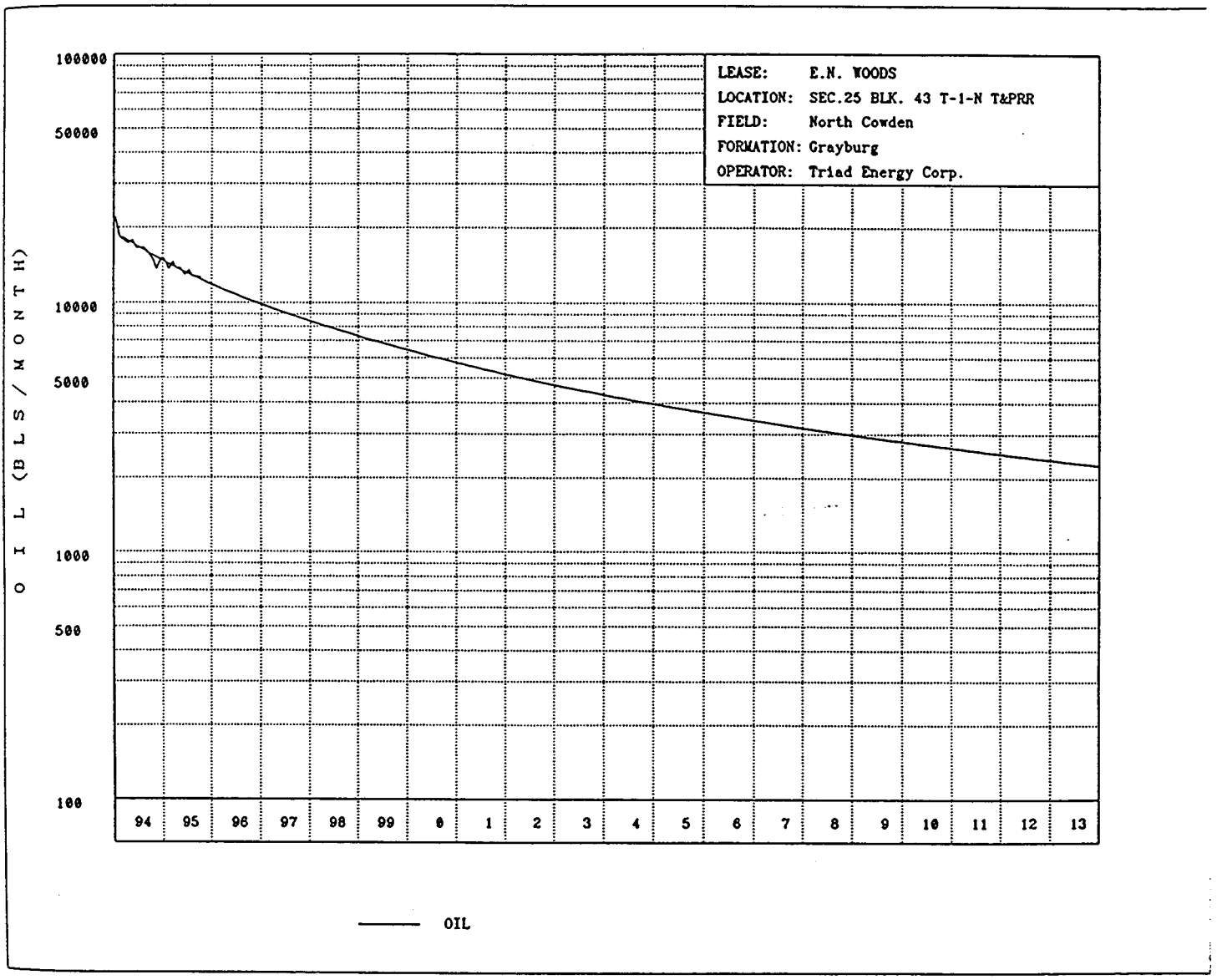


Figure 10 - Oil Decline Curve of the E.N. WOODS Unit

6.2 HISTORY MATCHING

The purpose of the history matching was to replicate the field's measured performance and fluid flow mechanisms. Upon completion of the model design, BOAST II was run to match the amount of oil produced by the reservoir from 1970 to 1996, and the average pressure of the reservoir.

Initially, porosity and absolute permeability were averaged for each producing layer at 4% porosity cut off. Flow indexes (PID and WI) were computed over the appropriate net thicknesses to reflect the 4% porosity cut off. Relative permeabilities for the oil-water and oil-gas systems (Krow, Krw, Krog, Krg) were alternatively adjusted to boost oil production. After several trials, oil rates increased substantially. However, the model produced approximately 50% of actual oil recovered. In addition, the average reservoir pressure was about 6000 psi.

After review of the model input data and output results, the absolute permeability was increased by 10% for each layer. Flow indexes were recalculated to reflect the changes in absolute permeabilities. Those values and relative permeabilities were then slightly adjusted one at a time. Those adjustments and data manipulations finally generated a good match. I attempted to match the gas production. However, review of production history showed inconsistency in the gas data with corresponding oil production. Therefore, the gas was not matched.

The model produced 225,000 barrels of oil for primary recovery (1970 - 1975). This was in agreement with data obtained from Petroleum Information. The secondary recovery began in early 1976 with ten lease line injection wells. Oil production fluctuated more from 1976 to 1996. However, the cumulative oil produced was a good match to the actual cumulative oil produced provided by Petroleum Information. From the summary report (appendix B), it can be seen that the model generated 3.86 million barrels of oil. This was the exact amount of oil actually produced. The average

reservoir pressure generated by the model is 1587 psi which is close to 1500 psi provided by TRIAD. The reservoir performance history matching is given in Figure 11.

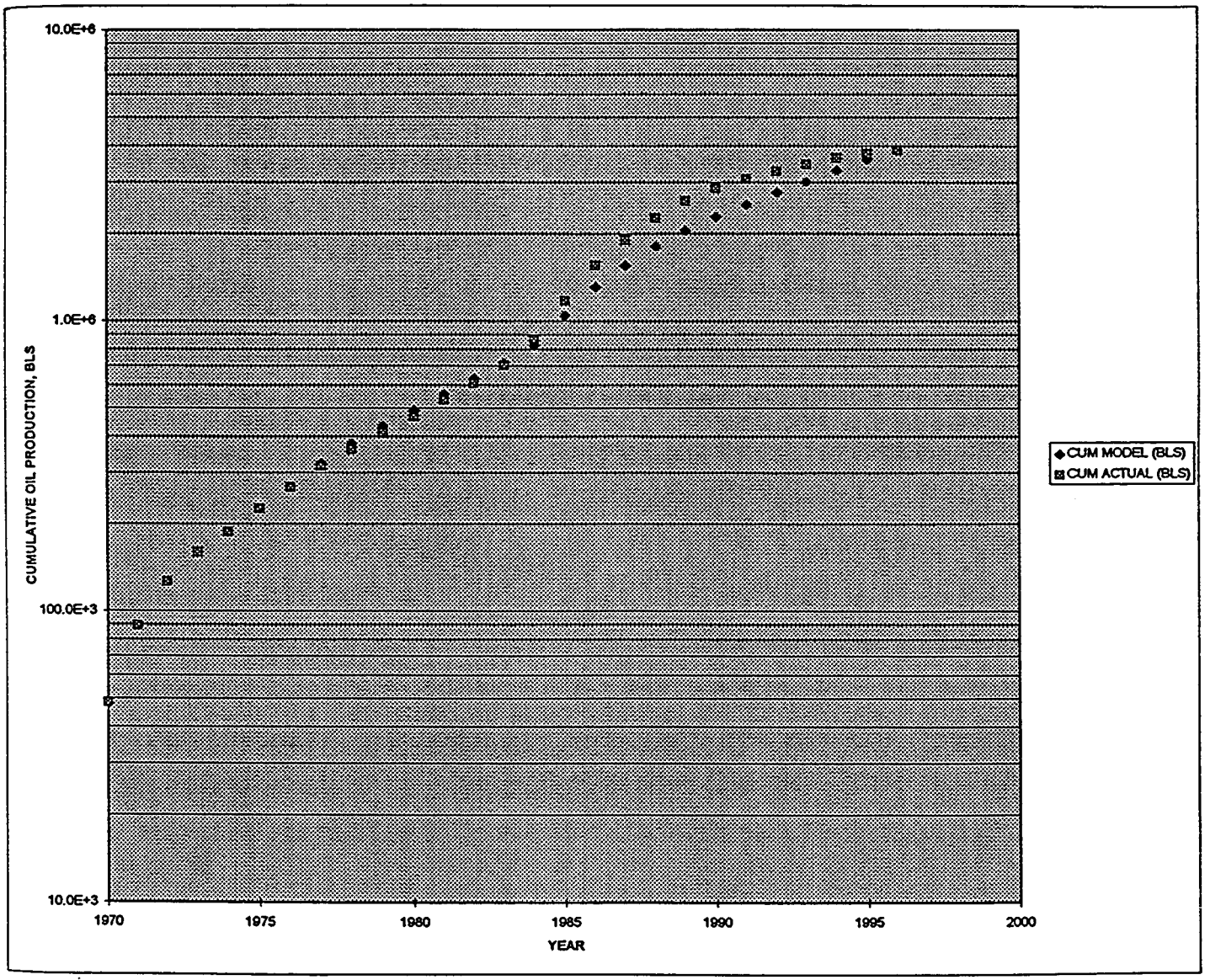


Figure 11 - Reservoir Performance History matching of The E.N. WOODS Unit

6.3 FUTURE PERFORMANCE PREDICTIONS

Once the reservoir model was satisfactorily history matched, a new file was built to predict future performance of the E.N. WOODS Lease. Pressure, oil and water saturation distributions of the last time step of December 1996 of the history matching results were used as initial pressure and saturations for the prediction model. Those value were specified for each grid block. Moreover, the average reservoir pressure was used as a constraint parameter for the producing wells because future oil rates for those wells were unknown. Oil, water, gas and total fluid rates were set to zero. However, water injection rate was specified as constraint for all injectors. 3 cases were run to forecast the performance of the reservoir over a period of ten 10 years, from 1997 to 2006. Water cut was set to 95%.

Case 1

This run was performed as an extension of the history matching. Initial water injection rates remained unchanged. 1.1 million barrels of oil were recovered. 3.1 million barrels of water injected. 1.3 million barrels of water were produced. The gas produced was 570 MMSCF. The reservoir pressure was 1590 psi.

Case 2

The actual total water injection rate for 1992 obtained from previous reports was increased by 25% to estimate a current 1997 water injection rate. 5.89 million barrels of oil were recovered. 22.7 million barrels of water were injected in the reservoir. 13.4 million barrels of water were produced. Gas production was 3184 MMSCF. The reservoir pressure was 1668 psi.

Case 3

Water injection rate from case 2 was reduced by 50% in order to determine the impact of the amount of water injected on oil production. 3.5 million barrels of oil were produced along with 1870 MMSCF of gas. 5.71 million barrels of water were produced

for 11.4 million barrels of water injected. Reservoir pressure was 1633 psi. 50% decrease in the amount of water injected in the reservoir resulted in 40% reduction in the cumulative oil production over the 10 years period. The reservoir pressure was only 2% lower than in case 2.

Figures 12, 13, 14, and 15 illustrate the cumulative oil, gas and water produced as well as water injected for all three cases. Figures 16, 17 and 18 show oil, gas and water production rates per year for all three cases. Oil and gas production rates for case 1 remained constant with no noticeable change over the 10 years projection period. On the other hand, oil and gas production rates for case 2 and 3 reached a peak in 1998 and then exhibited a steady decline thereafter. This was a normal behavior of the reservoir. The average oil production was 107000 BLS/Y for case1, 589000 BLS/Y for case 2 and 350000 BLS/Y for case 3. Likewise, average gas production rate was 56900 MSCF/Y for case 1, 318400 MSCF/Y for case 2 and 187000 MSCF/Y for case 3.

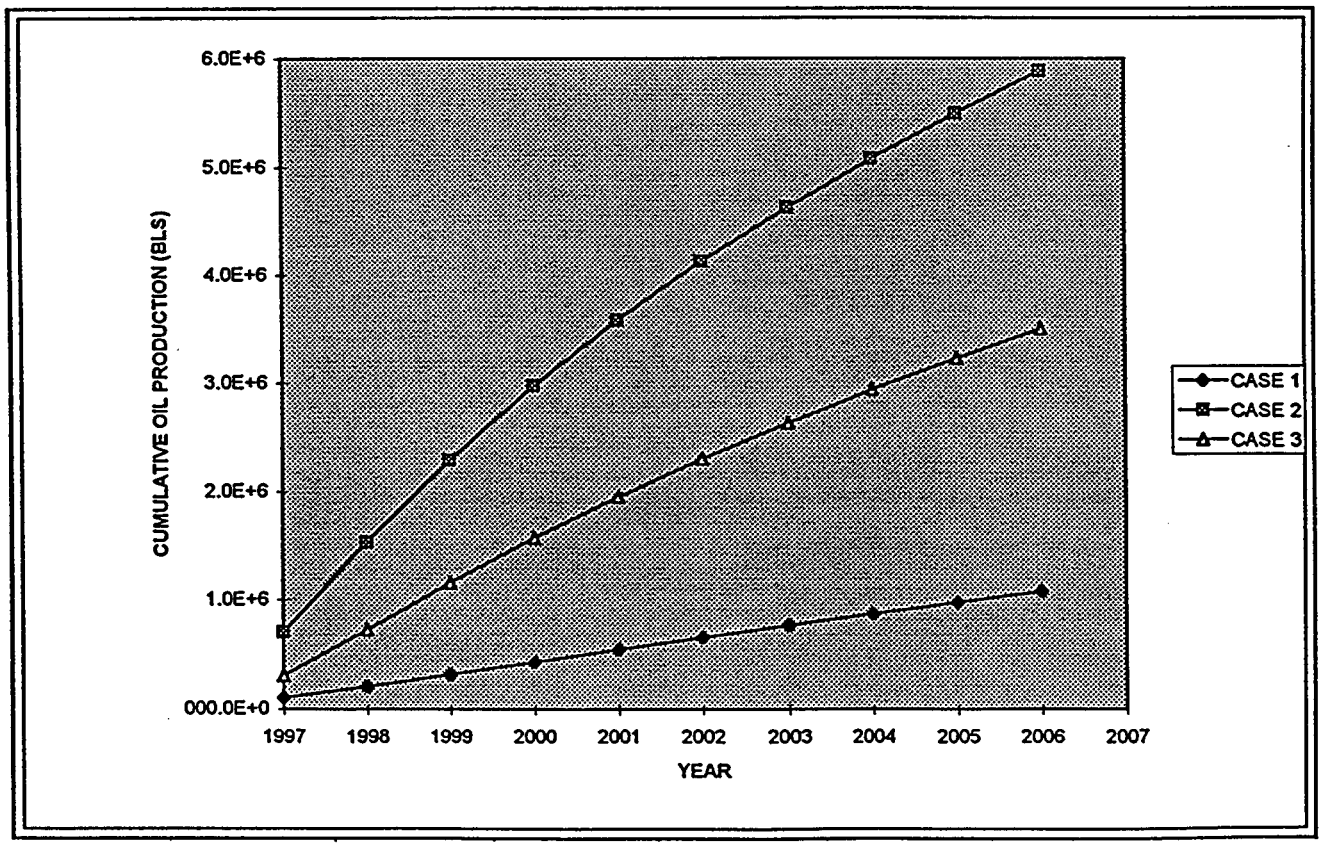


Figure 12 - Waterflood Model Projections - Cum Oil

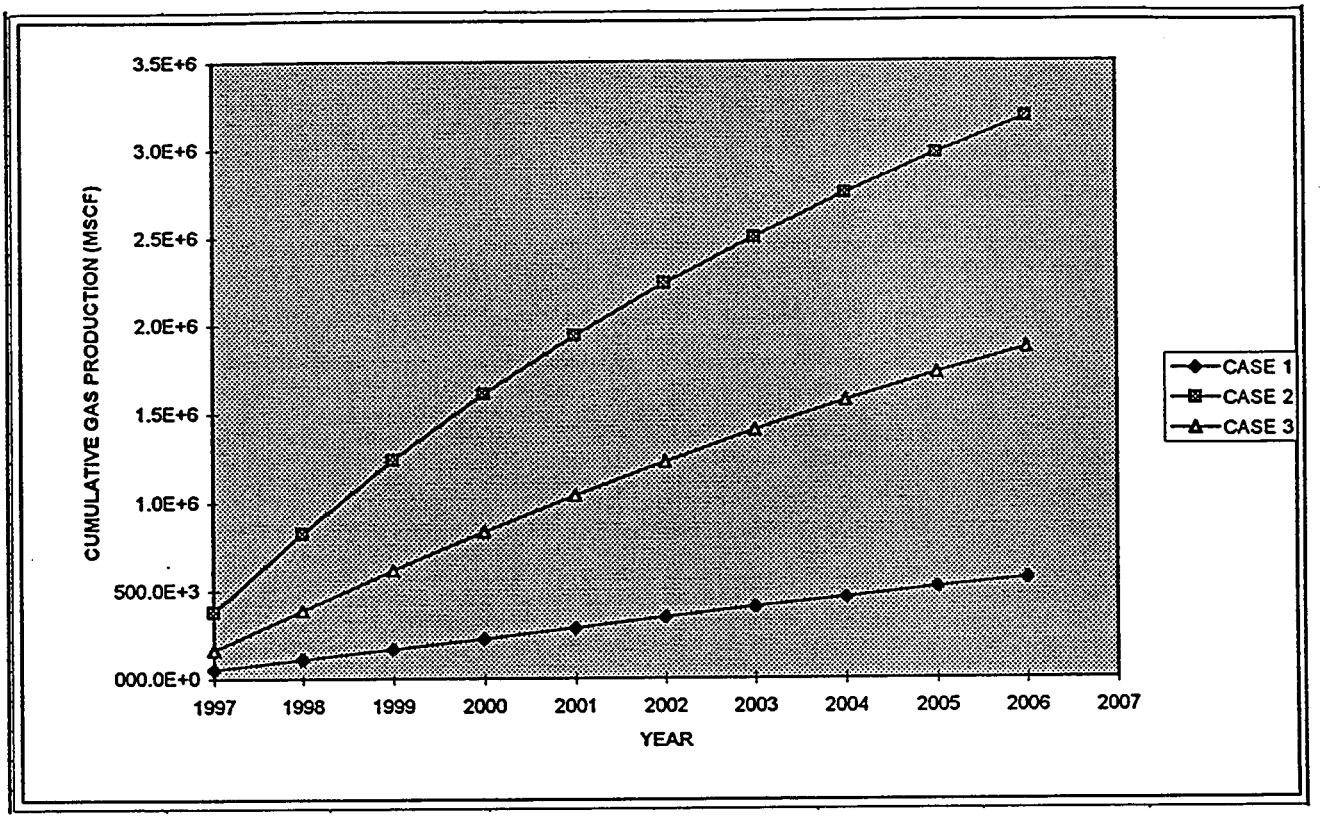


Figure 13 - Waterflood Model Projections - Cum Gas

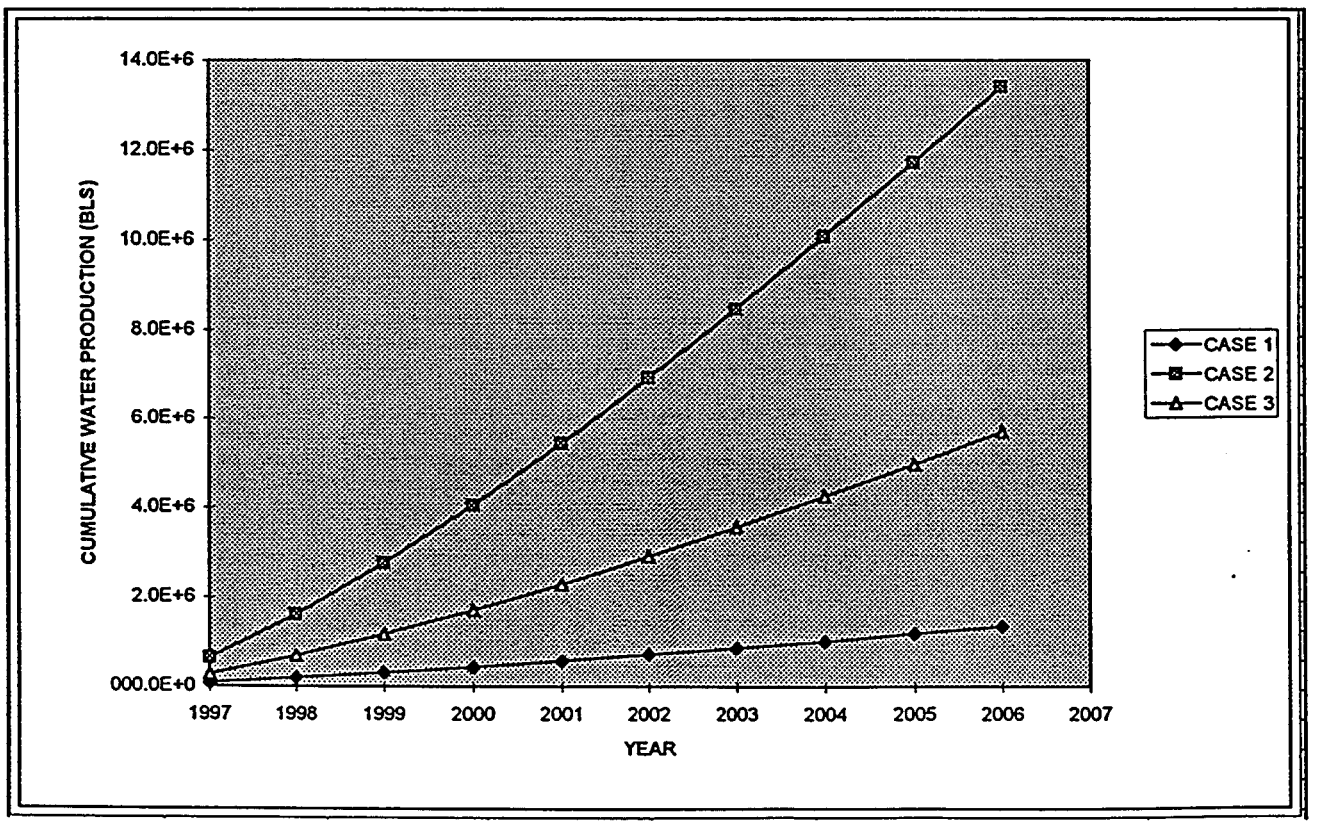


Figure 14 - Waterflood Model Projections - Cum Water Prod.

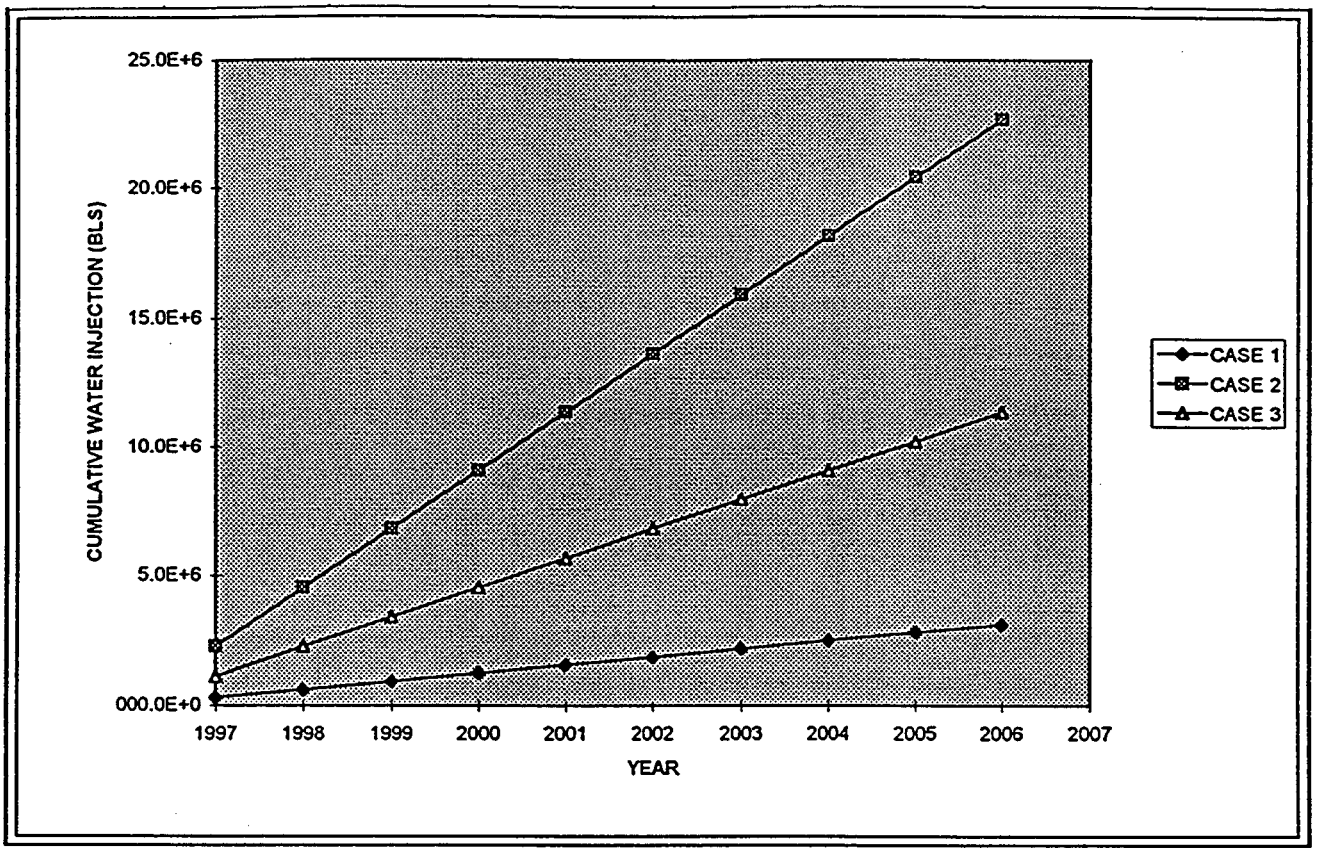


Figure 15 - Waterflood Model Projections - Cum Water Inj.

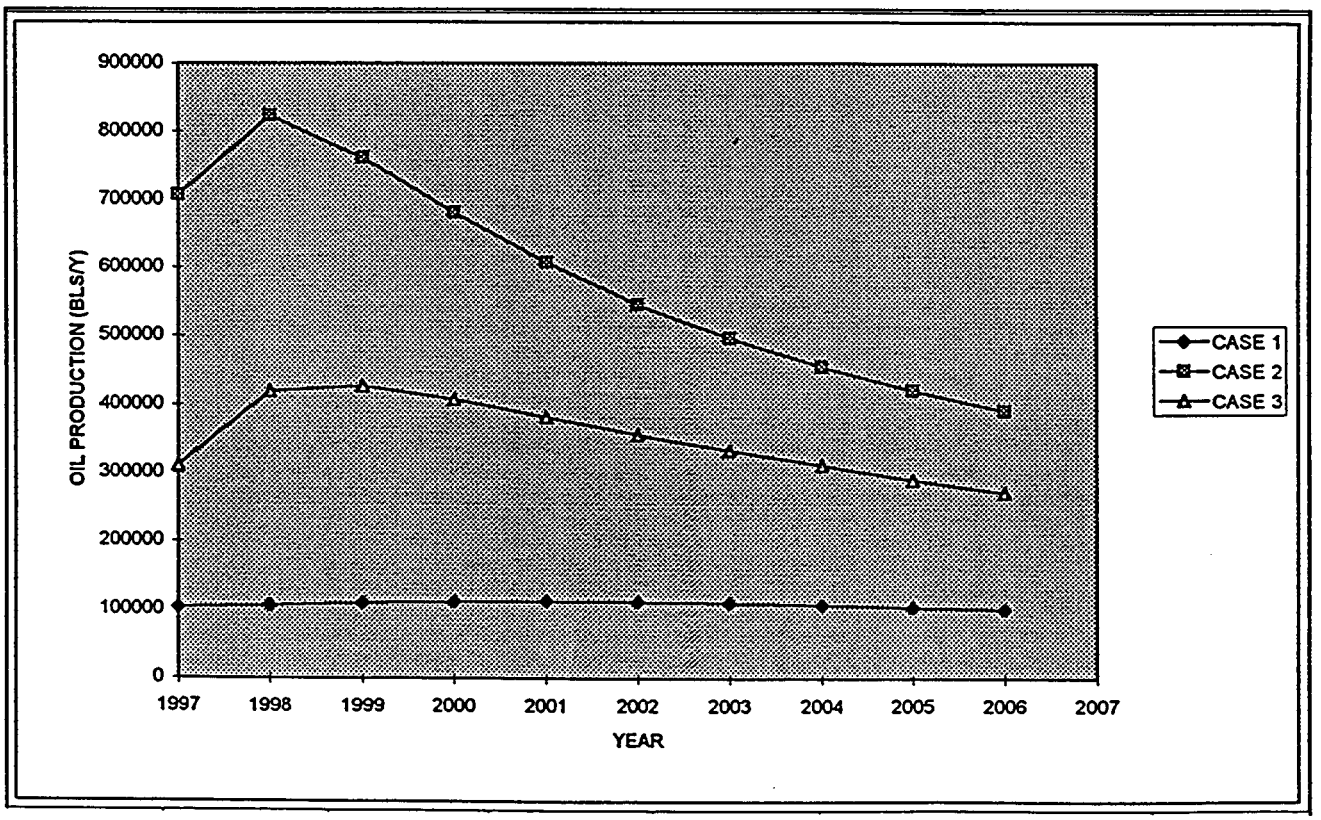


Figure 16 - Waterflood Model Projections - Oil Prod/Y

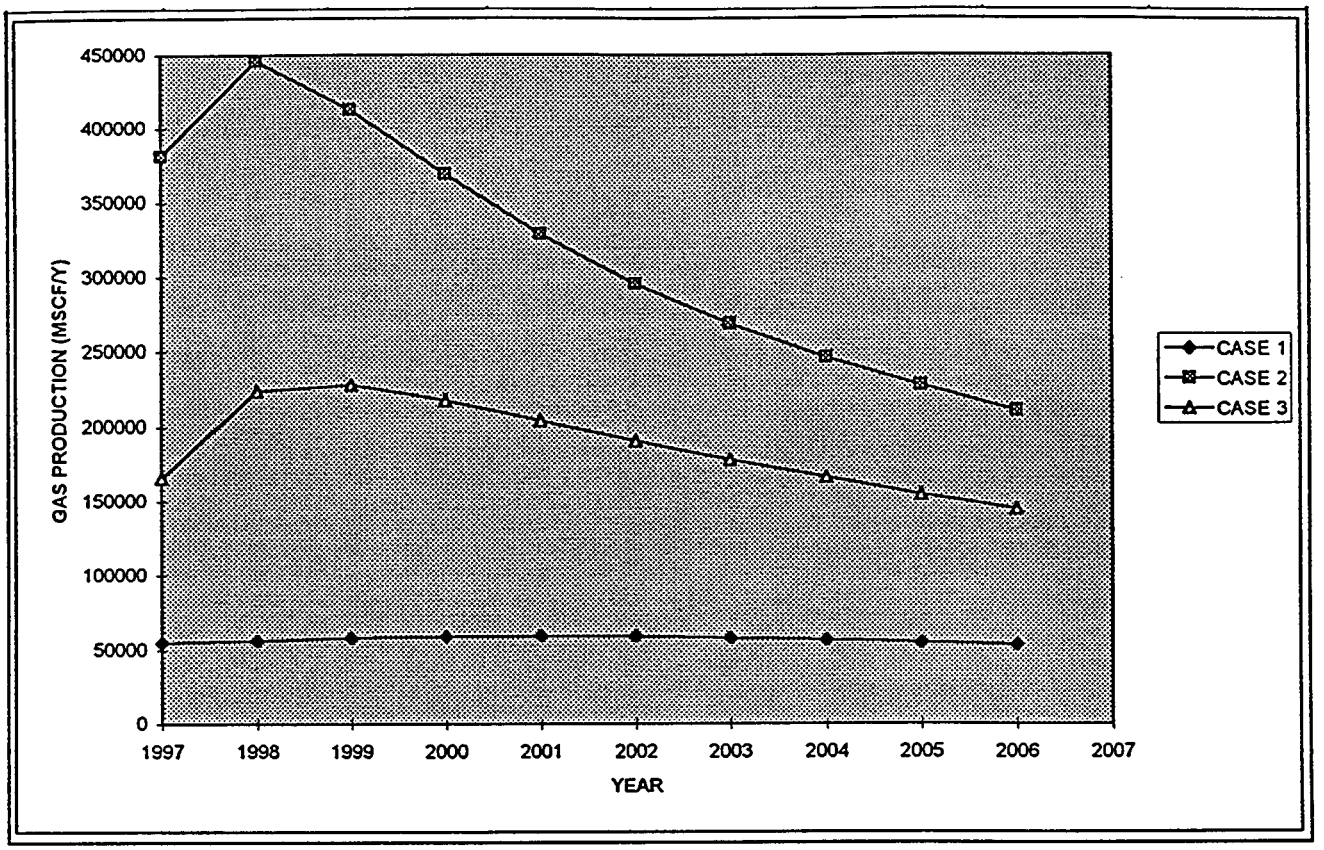


Figure 17 - Waterflood Model Projections - Gas Prod/Y

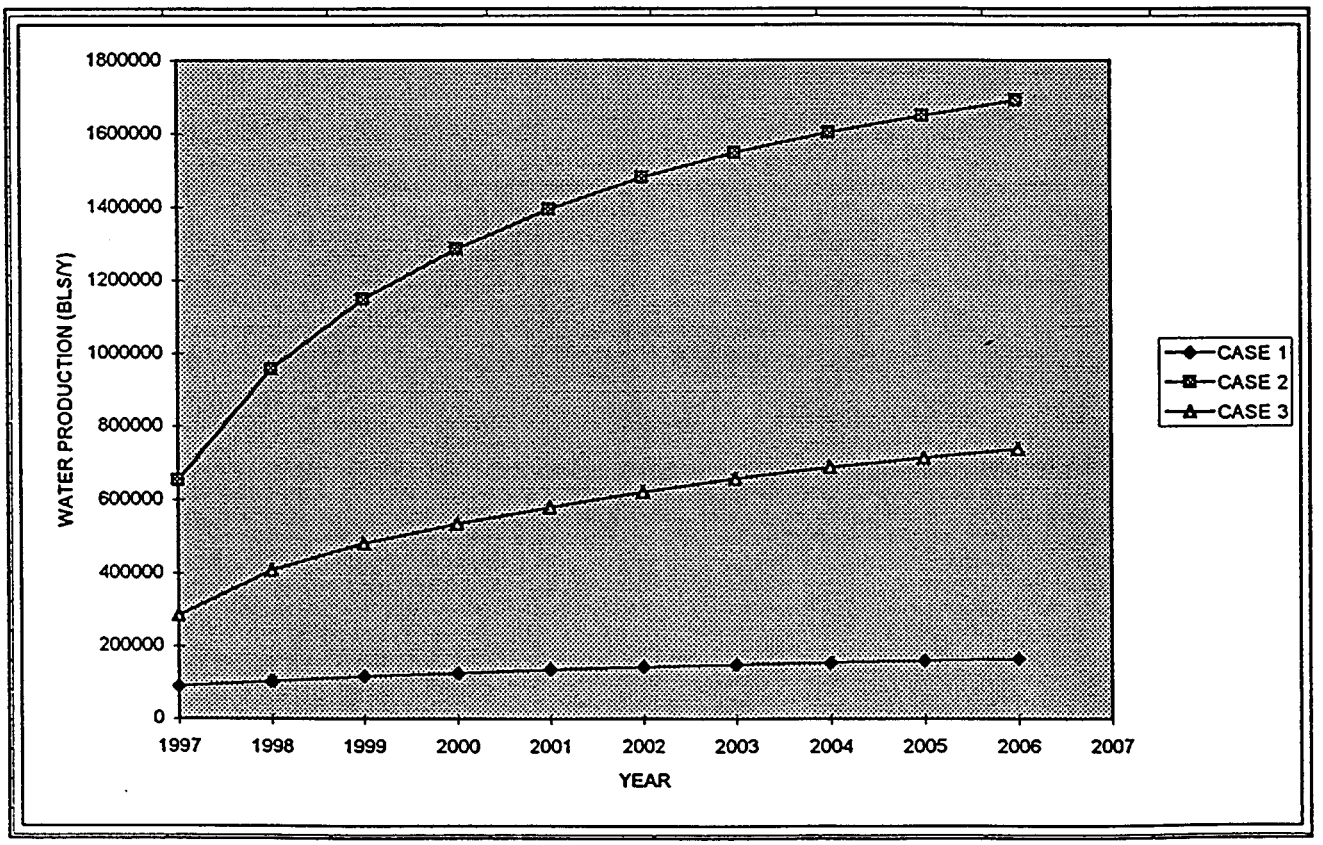


Figure 18 - Waterflood Model Projections - Water Prod/Y

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

Waterflood study was conducted on the E.N. WOODS lease. A 3-D layered model was designed by taking into consideration the geology, petrophysics and production history of the unit.

A decline curve analysis was performed based on the production data of the field. the original oil in place was 31.4 million barrels and the reserve, as of January 1997, was estimated to be 27.5 million barrels of oil.

Black oil simulator, BOAST II, was used to replicate past performance of the reservoir from 1970 to 1996. The model generated 3.86 million barrels of oil which was the exact amount of oil actually produced. The model also yielded an average reservoir pressure of 1587 psi which was close to the actual 1500 psi.

Future performance of the unit was also performed over a period of 10 years (1997 - 2006). 3 cases were simulated. case 2 provided the best alternative to forecast the behavior of the reservoir. 5.89 million barrels of oil were recovered for 22.7 million barrels of water injected. This is approximately 1 barrel of oil produced for 4 barrels of water injected.

7.2 RECOMMENDATIONS

Based upon the results of the three cases projected by the model, I recommend that TRIAD Energy Corporation inject approximately 2.3 million barrels of water per year for 10 years in the reservoir to sustain a profitable oil recovery. Afterward the performance of the reservoir should be reevaluated.

TRIAD should use the model built for this study as a surveillance tool for the unit.

Future work should investigate production history prior to January 1, 1970 and the model parameters (formation saturations) must be accounted for.

Overall, E.N. WOODS unit is a low permeability reservoir. Therefore, a tertiary recovery technique such as in-situ gelation should be looked into to determine its feasibility, applicability to the reservoir and the amount of recoverable oil under in-situ gelation.

An economic evaluation study should be conducted to determine the feasibility and profitability of the technical recommendations.

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APPENDIX A

E N.. WOODS LEASE PRODUCTION DATA

PRODUCTION SUMMARY REPORT

MON	YEAR	OIL/COND. PRODUCTION ----BLS---	OIL/COND. SALE BLS-	OIL/COND. CUMULATIVE SALES BLS-	GAS SALES -MCF-	GAS CUMULATIVE SALES MCF-	GAS GAS/OIL MCF/BBL	WATER PRODUCTION ----BLS---	WATER CUMULATIVE PROD. BLS-	WATER WATER/OIL BLS/BBL--
JAN	1970	3312.00	3312.00	3312.0	16552.0	16552.	5.00	.00	.00	.00
FEB		4425.00	4425.00	7737.0	18158.0	34710.	4.10	.00	.00	.00
MAR		4144.00	4144.00	11881.0	18900.0	53610.	4.56	.00	.00	.00
APR		4482.00	4482.00	16363.0	21174.0	74784.	4.72	.00	.00	.00
MAY		4048.00	4048.00	20411.0	21368.0	96152.	5.28	.00	.00	.00
JUN		4164.00	4164.00	24575.0	21270.0	117422.	5.11	.00	.00	.00
JUL		3948.00	3948.00	28523.0	22279.0	139701.	5.64	.00	.00	.00
AUG		4120.00	4120.00	32643.0	21470.0	161171.	5.21	.00	.00	.00
SEP		3828.00	3828.00	36471.0	19923.0	181094.	5.20	.00	.00	.00
OCT		4179.00	4179.00	40650.0	19266.0	200360.	4.61	.00	.00	.00
NOV		3878.00	3878.00	44528.0	17986.0	218346.	4.64	.00	.00	.00
DEC		3977.00	3977.00	48505.0	19623.0	237969.	4.93	.00	.00	.00
YEAR TOTAL		48505.00	48505.00		237969.0			.00		
JAN	1971	3798.00	3798.00	52303.0	18477.0	256446.	4.86	.00	.00	.00
FEB		2987.00	2987.00	55290.0	16617.0	273063.	5.56	.00	.00	.00
MAR		3066.00	3066.00	58356.0	16204.0	289267.	5.29	.00	.00	.00
APR		3130.00	3130.00	61486.0	17158.0	306425.	5.48	.00	.00	.00
MAY		2713.00	2713.00	64199.0	16007.0	322432.	5.90	.00	.00	.00
JUN		2982.00	2982.00	67181.0	16931.0	339363.	5.68	.00	.00	.00
JUL		2874.00	2874.00	70055.0	17463.0	356826.	6.08	.00	.00	.00
AUG		4410.00	4410.00	74465.0	22397.0	379223.	5.08	.00	.00	.00
SEP		3881.00	3881.00	78346.0	23947.0	403170.	6.17	.00	.00	.00
OCT		3736.00	3736.00	82082.0	22748.0	425918.	6.09	.00	.00	.00
NOV		3639.00	3639.00	85721.0	21222.0	447140.	5.83	.00	.00	.00
DEC		3353.00	3353.00	89074.0	20200.0	467340.	6.02	.00	.00	.00
YEAR TOTAL		40569.00	40569.00		229371.0			.00		
JAN	1972	4311.00	4311.00	93385.0	24607.0	491947.	5.71	.00	.00	.00
FEB		2898.00	2898.00	96283.0	20242.0	512189.	6.98	.00	.00	.00
MAR		3420.00	3420.00	99703.0	19382.0	531571.	5.67	.00	.00	.00
APR		3371.00	3371.00	103074.0	19385.0	550956.	5.75	.00	.00	.00
MAY		3517.00	3517.00	106591.0	20955.0	571911.	5.96	.00	.00	.00
JUN		3324.00	3324.00	109915.0	21292.0	593203.	6.41	.00	.00	.00
JUL		3332.00	3332.00	113247.0	19203.0	612406.	5.76	.00	.00	.00
AUG		2785.00	2785.00	116032.0	18901.0	631307.	6.79	.00	.00	.00
SEP		2503.00	2503.00	118535.0	17594.0	648901.	7.03	.00	.00	.00
OCT		2615.00	2615.00	121150.0	18041.0	666942.	6.90	.00	.00	.00
NOV		2547.00	2547.00	123697.0	16602.0	683544.	6.52	.00	.00	.00
DEC		2539.00	2539.00	126236.0	17467.0	701011.	6.88	.00	.00	.00
YEAR TOTAL		37162.00	37162.00		233671.0			.00		

PRODUCTION SUMMARY REPORT

		OIL/COND.			GAS			WATER		
MON	YEAR	PRODUCTION ----BLS---	SALE BLS-	CUMULATIVE SALES BLS-	SALES -MCF-	CUMULATIVE SALES MCF-	GAS/OIL MCF/BBL	PRODUCTION ----BLS---	CUMULATIVE PROD. BLS-	WATER/OIL BLS/BBL--
JAN	1973	2539.00	2539.00	128775.0	24219.0	725230.	9.54	.00	.00	.00
FEB		3556.00	3556.00	132331.0	18284.0	743514.	5.14	.00	.00	.00
MAR		3055.00	3055.00	135386.0	21956.0	765470.	7.19	.00	.00	.00
APR		2496.00	2496.00	137882.0	13923.0	779393.	5.58	.00	.00	.00
MAY		2749.00	2749.00	140631.0	14101.0	793494.	5.13	.00	.00	.00
JUN		2418.00	2418.00	143049.0	15762.0	809256.	6.52	.00	.00	.00
JUL		2613.00	2613.00	145662.0	16878.0	826134.	6.46	.00	.00	.00
AUG		3291.00	3291.00	148953.0	16031.0	842165.	4.87	.00	.00	.00
SEP		2371.00	2371.00	151324.0	16516.0	858681.	6.97	.00	.00	.00
OCT		3213.00	3213.00	154537.0	21884.0	880565.	6.81	.00	.00	.00
NOV		2322.00	2322.00	156859.0	15689.0	896254.	6.76	.00	.00	.00
DEC		2684.00	2684.00	159543.0	17668.0	913922.	6.58	.00	.00	.00
YEAR	TOTAL	33307.00	33307.00		212911.0			.00		
JAN	1974	3230.00	3230.00	162773.0	21527.0	935449.	6.66	.00	.00	.00
FEB		2155.00	2155.00	164928.0	14883.0	950332.	6.91	.00	.00	.00
MAR		2286.00	2286.00	167214.0	16662.0	966994.	7.29	.00	.00	.00
APR		2187.00	2187.00	169401.0	15359.0	982353.	7.02	.00	.00	.00
MAY		1293.00	1293.00	170694.0	14034.0	996387.	10.85	.00	.00	.00
JUN		2645.00	2645.00	173339.0	16915.0	1013302.	6.40	.00	.00	.00
JUL		2455.00	2455.00	175794.0	20414.0	1033716.	8.32	.00	.00	.00
AUG		2264.00	2264.00	178058.0	17375.0	1051091.	7.67	.00	.00	.00
SEP		2129.00	2129.00	180187.0	15216.0	1066307.	7.15	.00	.00	.00
OCT		1977.00	1977.00	182164.0	16332.0	1082639.	8.26	.00	.00	.00
NOV		2815.00	2815.00	184979.0	24416.0	1107055.	8.67	.00	.00	.00
DEC		2696.00	2696.00	187675.0	24511.0	1131566.	9.09	.00	.00	.00
YEAR	TOTAL	28132.00	28132.00		217644.0			.00		
JAN	1975	4210.00	4210.00	191885.0	24962.0	1156528.	5.93	.00	.00	.00
FEB		3812.00	3812.00	195697.0	24340.0	1180868.	6.39	.00	.00	.00
MAR		3917.00	3917.00	199614.0	28062.0	1208930.	7.16	.00	.00	.00
APR		3345.00	3345.00	202959.0	24238.0	1233168.	7.25	.00	.00	.00
MAY		3247.00	3247.00	206206.0	23790.0	1256958.	7.33	.00	.00	.00
JUN		2826.00	2826.00	209032.0	22398.0	1279356.	7.93	.00	.00	.00
JUL		3094.00	3094.00	212126.0	27026.0	1306382.	8.73	.00	.00	.00
AUG		3065.00	3065.00	215191.0	26700.0	1333082.	8.71	.00	.00	.00
SEP		2727.00	2727.00	217918.0	21444.0	1354526.	7.86	.00	.00	.00
OCT		3075.00	3075.00	220993.0	21964.0	1376490.	7.14	.00	.00	.00
NOV		1982.00	1982.00	222975.0	11381.0	1387871.	5.74	.00	.00	.00
DEC		2915.00	2915.00	225890.0	20876.0	1408747.	7.16	63.00	63.00	.02
YEAR	TOTAL	38215.00	38215.00		277181.0			63.00		

PRODUCTION SUMMARY REPORT

		OIL/COND.			GAS			WATER		
MON	YEAR	PRODUCTION ----BLS---	SALE BLS-	CUMULATIVE SALES BLS-	SALES -MCF-	CUMULATIVE SALES MCF-	GAS/OIL MCF/BBL	PRODUCTION ----BLS---	CUMULATIVE PROD. BLS-	WATER/OIL BLS/BBL--
JAN	1976	2315.00	2315.00	228205.0	19373.0	1428120.	8.37	403.00	466.00	.17
FEB		2546.00	2546.00	230751.0	18652.0	1446772.	7.33	287.00	753.00	.11
MAR		2239.00	2239.00	232990.0	18745.0	1465517.	8.37	284.00	1037.00	.13
APR		1509.00	1509.00	234499.0	12827.0	1478344.	8.50	210.00	1247.00	.14
MAY		2343.00	2343.00	236842.0	17311.0	1495655.	7.39	367.00	1614.00	.16
JUN		2934.00	2934.00	239776.0	21452.0	1517107.	7.31	544.00	2158.00	.19
JUL		5159.00	5159.00	244935.0	33690.0	1550797.	6.53	487.00	2645.00	.09
AUG		4814.00	4814.00	249749.0	30353.0	1581150.	6.31	487.00	3132.00	.10
SEP		5387.00	5387.00	255136.0	32780.0	1613930.	6.09	391.00	3523.00	.07
OCT		4611.00	4611.00	259747.0	29138.0	1643068.	6.32	401.00	3924.00	.09
NOV		3785.00	3785.00	263532.0	25287.0	1668355.	6.68	334.00	4258.00	.09
DEC		4030.00	4030.00	267562.0	25508.0	1693863.	6.33	383.00	4641.00	.10
YEAR	TOTAL	41672.00	41672.00		285116.0			4578.00		
JAN	1977	4956.00	4956.00	272518.0	28621.0	1722484.	5.78	481.00	5122.00	.10
FEB		4495.00	4495.00	277013.0	28665.0	1751149.	6.38	520.00	5642.00	.12
MAR		4032.00	4032.00	281045.0	29226.0	1780375.	7.25	482.00	6124.00	.12
APR		3535.00	3535.00	284580.0	25848.0	1806223.	7.31	435.00	6559.00	.12
MAY		4024.00	4024.00	288604.0	26648.0	1832871.	6.62	509.00	7068.00	.13
JUN		3252.00	3252.00	291856.0	23689.0	1856560.	7.28	476.00	7544.00	.15
JUL		4550.00	4550.00	296406.0	27524.0	1884084.	6.05	682.00	8226.00	.15
AUG		4165.00	4165.00	300571.0	26218.0	1910302.	6.29	690.00	8916.00	.17
SEP		3898.00	3898.00	304469.0	25060.0	1935362.	6.43	690.00	9606.00	.18
OCT		4213.00	4213.00	308682.0	24902.0	1960264.	5.91	822.00	10428.00	.20
NOV		3751.00	3751.00	312433.0	22993.0	1983257.	6.13	759.00	11187.00	.20
DEC		3804.00	3804.00	316237.0	22094.0	2005351.	5.81	825.00	12012.00	.22
YEAR	TOTAL	48675.00	48675.00		311488.0			7371.00		
JAN	1978	2530.00	2530.00	318767.0	14442.0	2019793.	5.71	570.00	12582.00	.23
FEB		2467.00	2467.00	321234.0	13124.0	2032917.	5.32	693.00	13275.00	.28
MAR		4509.00	4509.00	325743.0	21533.0	2054450.	4.78	1148.00	14423.00	.25
APR		4034.00	4034.00	329777.0	19828.0	2074278.	4.92	1065.00	15488.00	.26
MAY		3591.00	3591.00	333368.0	17941.0	2092219.	5.00	1006.00	16494.00	.28
JUN		3641.00	3641.00	337009.0	17036.0	2109255.	4.68	1080.00	17574.00	.30
JUL		3563.00	3563.00	340572.0	16510.0	2125765.	4.63	1117.00	18691.00	.31
AUG		3207.00	3207.00	343779.0	15631.0	2141396.	4.87	1062.00	19753.00	.33
SEP		4351.00	4351.00	348130.0	16252.0	2157648.	3.74	1518.00	21271.00	.35
OCT		4119.00	4119.00	352249.0	16014.0	2173662.	3.89	1513.00	22784.00	.37
NOV		4056.00	4056.00	356305.0	14910.0	2188572.	3.68	1566.00	24350.00	.39
DEC		3851.00	3851.00	360156.0	14269.0	2202841.	3.71	1564.00	25914.00	.41
YEAR	TOTAL	43919.00	43919.00		197490.0			13902.00		

P R O D U C T I O N S U M M A R Y R E P O R T

		OIL/COND.			GAS			WATER		
MON	YEAR	PRODUCTION ----BLS---	SALE BLS-	CUMULATIVE SALES BLS-	SALES -MCF-	CUMULATIVE SALES MCF-	GAS/OIL MCF/BBL	PRODUCTION ----BLS---	CUMULATIVE PROD. BLS-	WATER/OIL BLS/BBL--
JAN	1979	4238.00	4238.00	364394.0	13259.0	2216100.	3.13	1795.00	27709.00	.42
FEB		3510.00	3510.00	367904.0	11689.0	2227789.	3.33	1566.00	29275.00	.45
MAR		3681.00	3681.00	371585.0	11976.0	2239765.	3.25	1618.00	30893.00	.44
APR		4071.00	4071.00	375656.0	8784.0	2248549.	2.16	1765.00	32658.00	.43
MAY		4150.00	4150.00	379806.0	7308.0	2255857.	1.76	1774.00	34432.00	.43
JUN		4036.00	4036.00	383842.0	8756.0	2264613.	2.17	1702.00	36134.00	.42
JUL		4071.00	4071.00	387913.0	10458.0	2275071.	2.57	1694.00	37828.00	.42
AUG		4372.00	4372.00	392285.0	11937.0	2287008.	2.73	1796.00	39624.00	.41
SEP		4289.00	4289.00	396574.0	10993.0	2298001.	2.56	1738.00	41362.00	.41
OCT		4255.00	4255.00	400829.0	10398.0	2308399.	2.44	1703.00	43065.00	.40
NOV		4404.00	4404.00	405233.0	9351.0	2317750.	2.12	1739.00	44804.00	.39
DEC		4696.00	4696.00	409929.0	9935.0	2327685.	2.12	1776.00	46580.00	.38
YEAR TOTAL		49773.00	49773.00		124844.0			20666.00		
JAN	1980	5113.00	5113.00	415042.0	10292.0	2337977.	2.01	1501.00	48081.00	.29
FEB		4339.00	4339.00	419381.0	8737.0	2346714.	2.01	1278.00	49359.00	.29
MAR		5093.00	5093.00	424474.0	9171.0	2355885.	1.80	1505.00	50864.00	.30
APR		4902.00	4902.00	429376.0	8769.0	2364654.	1.79	1454.00	52318.00	.30
MAY		4834.00	4834.00	434210.0	8779.0	2373433.	1.82	1439.00	53757.00	.30
JUN		4491.00	4491.00	438701.0	8285.0	2381718.	1.84	1343.00	55100.00	.30
JUL		4417.00	4417.00	443118.0	8594.0	2390312.	1.95	1326.00	56426.00	.30
AUG		4678.00	4678.00	447796.0	8630.0	2398942.	1.84	1410.00	57836.00	.30
SEP		4736.00	4736.00	452532.0	8643.0	2407585.	1.82	1433.00	59269.00	.30
OCT		4809.00	4809.00	457341.0	10194.0	2417779.	2.12	1460.00	60729.00	.30
NOV		6131.00	6131.00	463472.0	7961.0	2425740.	1.30	1869.00	62598.00	.30
DEC		4880.00	4880.00	468352.0	7851.0	2433591.	1.61	1496.00	64094.00	.31
YEAR TOTAL		58423.00	58423.00		105906.0			17514.00		
JAN	1981	5222.00	5222.00	473574.0	7731.0	2441322.	1.48	1603.00	65697.00	.31
FEB		4581.00	4581.00	478155.0	6507.0	2447829.	1.42	1411.00	67108.00	.31
MAR		6607.00	6607.00	484762.0	7533.0	2455362.	1.14	2074.00	69182.00	.31
APR		4381.00	4381.00	489143.0	6236.0	2461598.	1.42	1444.00	70626.00	.33
MAY		5710.00	5710.00	494853.0	6473.0	2468071.	1.13	1945.00	72571.00	.34
JUN		5366.00	5366.00	500219.0	6029.0	2474100.	1.12	1832.00	74403.00	.34
JUL		5467.00	5467.00	505686.0	6051.0	2480151.	1.11	1955.00	76358.00	.36
AUG		5790.00	5790.00	511476.0	6332.0	2486483.	1.09	2102.00	78460.00	.36
SEP		5613.00	5613.00	517089.0	6184.0	2492667.	1.10	2097.00	80557.00	.37
OCT		5161.00	5161.00	522250.0	5893.0	2498560.	1.14	1982.00	82539.00	.38
NOV		5622.00	5622.00	527872.0	5580.0	2504140.	.99	2190.00	84729.00	.39
DEC		5805.00	5805.00	533677.0	7598.0	2511738.	1.31	2293.00	87022.00	.40
YEAR TOTAL		65325.00	65325.00		78147.0			22928.00		

PRODUCTION SUMMARY REPORT

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MON	YEAR	OIL/COND. PRODUCTION ----BLS---	OIL/COND. SALE BLS-	OIL/COND. CUMULATIVE SALES BLS-	GAS SALES -MCF-	GAS CUMULATIVE SALES MCF-	GAS GAS/OIL MCF/BBL	WATER PRODUCTION ----BLS---	WATER CUMULATIVE PROD. BLS-	WATER WATER/OIL BLS/BBL--
JAN	1982	5681.00	5681.00	539358.0	6622.0	2518360.	1.17	2324.00	89346.00	.41
FEB		5279.00	5279.00	544637.0	5720.0	2524080.	1.08	2279.00	91625.00	.43
MAR		6467.00	6467.00	551104.0	6104.0	2530184.	.94	3000.00	94625.00	.46
APR		6072.00	6072.00	557176.0	5840.0	2536024.	.96	3050.00	97675.00	.50
MAY		6222.00	6222.00	563398.0	5933.0	2541957.	.95	3307.00	100982.00	.53
JUN		6484.00	6484.00	569882.0	5976.0	2547933.	.92	5537.00	106519.00	.85
JUL		6648.00	6648.00	576530.0	4087.0	2552020.	.61	5439.00	111958.00	.82
AUG		6688.00	6688.00	583218.0	6363.0	2558383.	.95	5204.00	117162.00	.78
SEP		6314.00	6314.00	589532.0	6192.0	2564575.	.98	4719.00	121881.00	.75
OCT		5922.00	5922.00	595454.0	6241.0	2570816.	1.05	4220.00	126101.00	.71
NOV		6252.00	6252.00	601706.0	5483.0	2576299.	.88	4266.00	130367.00	.68
DEC		6183.00	6183.00	607889.0	5518.0	2581817.	.89	3932.00	134299.00	.64
YEAR TOTAL		74212.00	74212.00		70079.0			47277.00		
JAN	1983	6712.00	6712.00	614601.0	5776.0	2587593.	.86	4445.00	138744.00	.66
FEB		6174.00	6174.00	620775.0	4901.0	2592494.	.79	4286.00	143030.00	.69
MAR		6274.00	6274.00	627049.0	6238.0	2598732.	.99	4587.00	147617.00	.73
APR		6649.00	6649.00	633698.0	5752.0	2604484.	.87	5017.00	152634.00	.75
MAY		7243.00	7243.00	640941.0	5701.0	2610185.	.79	5672.00	158306.00	.78
JUN		7706.00	7706.00	648647.0	5367.0	2615552.	.70	6240.00	164546.00	.81
JUL		8123.00	8123.00	656770.0	5122.0	2620674.	.63	6780.00	171326.00	.83
AUG		8769.00	8769.00	665539.0	6749.0	2627423.	.77	7496.00	178822.00	.85
SEP		9151.00	9151.00	674690.0	6608.0	2634031.	.72	8050.00	186872.00	.88
OCT		9917.00	9917.00	684607.0	6068.0	2640099.	.61	8897.00	195769.00	.90
NOV		10210.00	10210.00	694817.0	5706.0	2645805.	.56	9359.00	205128.00	.92
DEC		9907.00	9907.00	704724.0	3696.0	2649501.	.37	9155.00	214283.00	.92
YEAR TOTAL		96835.00	96835.00		67684.0			79984.00		
JAN	1984	10956.00	10956.00	715680.0	5223.0	2654724.	.48	10229.00	224512.00	.93
FEB		9850.00	9850.00	725530.0	5373.0	2660097.	.55	9308.00	233820.00	.94
MAR		11245.00	11245.00	736775.0	5633.0	2665730.	.50	10803.00	244623.00	.96
APR		11323.00	11323.00	748098.0	5000.0	2670730.	.44	10986.00	255609.00	.97
MAY		12193.00	12193.00	760291.0	5071.0	2675801.	.42	11913.00	267522.00	.98
JUN		11669.00	11669.00	771960.0	4681.0	2680482.	.40	11526.00	279048.00	.99
JUL		12906.00	12906.00	784866.0	5112.0	2685594.	.40	12878.00	291926.00	1.00
AUG		12723.00	12723.00	797589.0	4874.0	2690468.	.38	12763.00	304689.00	1.00
SEP		13125.00	13125.00	810714.0	4421.0	2694889.	.34	13311.00	318000.00	1.01
OCT		14604.00	14604.00	825318.0	4534.0	2699423.	.31	14877.00	332877.00	1.02
NOV		18919.00	18919.00	844237.0	3850.0	2703273.	.20	18919.00	351796.00	1.00
DEC		21310.00	21310.00	865547.0	4512.0	2707785.	.21	20510.00	372306.00	.96
YEAR TOTAL		160823.00	160823.00		58284.0			158023.00		

PRODUCTION SUMMARY REPORT

		OIL/COND.			GAS			WATER		
MON	YEAR	PRODUCTION ----BLS---	SALE BLS-	CUMULATIVE SALES BLS-	SALES -MCF-	CUMULATIVE SALES MCF-	GAS/OIL MCF/BBL	PRODUCTION ----BLS---	CUMULATIVE PROD. BLS-	WATER/OIL BLS/BBL--
JAN	1985	21323.00	21323.00	886870.0	4113.0	2711898.	.19	19909.00	392215.00	.93
FEB		19139.00	19139.00	906009.0	3717.0	2715615.	.19	17385.00	409600.00	.91
MAR		22747.00	22747.00	928756.0	4120.0	2719735.	.18	20124.00	429724.00	.88
APR		21811.00	21811.00	950567.0	3896.0	2723631.	.18	18843.00	448567.00	.86
MAY		24583.00	24583.00	975150.0	3857.0	2727488.	.16	20700.00	469267.00	.84
JUN		25582.00	25582.00	1000732.0	4582.0	2732070.	.18	21138.00	490405.00	.83
JUL		26880.00	26880.00	1027612.0	4237.0	2736307.	.16	21691.00	512096.00	.81
AUG		27350.00	27350.00	1054962.0	4155.0	2740462.	.15	21632.00	533728.00	.79
SEP		28130.00	28130.00	1083092.0	3690.0	2744152.	.13	21795.00	555523.00	.77
OCT		29909.00	29909.00	1113001.0	3767.0	2747919.	.13	22715.00	578238.00	.76
NOV		29531.00	29531.00	1142532.0	3918.0	2751837.	.13	22005.00	600243.00	.75
DEC		31361.00	31361.00	1173893.0	4148.0	2755985.	.13	23402.00	623645.00	.75
YEAR	TOTAL	308346.00	308346.00		48200.0			251339.00		
JAN	1986	31082.00	31082.00	1204975.0	3462.0	2759447.	.11	22829.00	646474.00	.73
FEB		28321.00	28321.00	1233296.0	3177.0	2762624.	.11	20533.00	667007.00	.73
MAR		32377.00	32377.00	1265673.0	4016.0	2766640.	.12	23173.00	690180.00	.72
APR		31370.00	31370.00	1297043.0	3791.0	2770431.	.12	22138.00	712318.00	.71
MAY		32950.00	32950.00	1329993.0	4273.0	2774704.	.13	22959.00	735277.00	.70
JUN		32099.00	32099.00	1362092.0	3376.0	2778080.	.11	22086.00	757363.00	.69
JUL		31717.00	31717.00	1393809.0	2299.0	2780379.	.07	21552.00	778915.00	.68
AUG		31593.00	31593.00	1425402.0	1738.0	2782117.	.06	21201.00	800116.00	.67
SEP		31205.00	31205.00	1456607.0	1956.0	2784073.	.06	20656.00	820772.00	.66
OCT		33132.00	33132.00	1489739.0	3269.0	2787342.	.10	21664.00	842436.00	.65
NOV		32588.00	32588.00	1522327.0	3639.0	2790981.	.11	21051.00	863487.00	.65
DEC		33046.00	33046.00	1555373.0	3644.0	2794625.	.11	21090.00	884577.00	.64
YEAR	TOTAL	381480.00	381480.00		38640.0			260932.00		
JAN	1987	31910.00	31910.00	1587283.0	2819.0	2797444.	.09	20206.00	904783.00	.63
FEB		29613.00	29613.00	1616896.0	3184.0	2800628.	.11	19550.00	924333.00	.66
MAR		31602.00	31602.00	1648498.0	3713.0	2804341.	.12	21847.00	946180.00	.69
APR		30016.00	30016.00	1678514.0	3500.0	2807841.	.12	21764.00	967944.00	.73
MAY		28109.00	28109.00	1706623.0	3996.0	2811837.	.14	21327.00	989271.00	.76
JUN		26677.00	26677.00	1733300.0	3951.0	2815788.	.15	21298.00	1010569.00	.80
JUL		28334.00	28334.00	1761634.0	3591.0	2819379.	.13	23719.00	1034288.00	.84
AUG		27731.00	27731.00	1789365.0	3617.0	2822996.	.13	24354.00	1058642.00	.88
SEP		26656.00	26656.00	1816021.0	3369.0	2826365.	.13	24571.00	1083213.00	.92
OCT		27911.00	27911.00	1843932.0	3347.0	2829712.	.12	27121.00	1110334.00	.97
NOV		26047.00	26047.00	1869979.0	3289.0	2833001.	.13	26113.00	1136447.00	1.00
DEC		27194.00	27194.00	1897173.0	2699.0	2835700.	.10	27729.00	1164176.00	1.02
YEAR	TOTAL	341800.00	341800.00		41075.0			279599.00		

PRODUCTION SUMMARY REPORT

		OIL/COND.			GAS			WATER		
MON	YEAR	PRODUCTION ----BLS---	SALE BLS-	CUMULATIVE SALES BLS-	SALES -MCF-	CUMULATIVE SALES MCF-	GAS/OIL MCF/BBL	PRODUCTION ----BLS---	CUMULATIVE PROD. BLS-	WATER/OIL BLS/BBL--
JAN	1988	28289.00	28289.00	1925462.0	3399.0	2839099.	.12	29452.00	1193628.00	1.04
FEB		24931.00	24931.00	1950393.0	2884.0	2841983.	.12	26428.00	1220056.00	1.06
MAR		25015.00	25015.00	1975408.0	2462.0	2844445.	.10	26983.00	1247039.00	1.08
APR		26237.00	26237.00	2001645.0	3108.0	2847553.	.12	28813.00	1275852.00	1.10
MAY		27209.00	27209.00	2028854.0	3343.0	2850896.	.12	30405.00	1306257.00	1.12
JUN		25126.00	25126.00	2053980.0	3059.0	2853955.	.12	28527.00	1334784.00	1.14
JUL		32618.00	32618.00	2086598.0	2614.0	2856569.	.08	37575.00	1372359.00	1.15
AUG		38663.00	38663.00	2125261.0	3655.0	2860224.	.09	45256.00	1417615.00	1.17
SEP		35240.00	35240.00	2160501.0	4382.0	2864606.	.12	41857.00	1459472.00	1.19
OCT		35569.00	35569.00	2196070.0	4118.0	2868724.	.12	42930.00	1502402.00	1.21
NOV		32928.00	32928.00	2228998.0	3936.0	2872660.	.12	40260.00	1542662.00	1.22
DEC		29324.00	29324.00	2258322.0	3814.0	2876474.	.13	36370.00	1579032.00	1.24
YEAR TOTAL		361149.00	361149.00		40774.0			414856.00		
JAN	1989	26663.00	26663.00	2284985.0	3614.0	2880088.	.14	33478.00	1612510.00	1.26
FEB		21765.00	21765.00	2306750.0	2700.0	2882788.	.12	27819.00	1640329.00	1.28
MAR		27066.00	27066.00	2333816.0	3711.0	2886499.	.14	35917.00	1676246.00	1.33
APR		26575.00	26575.00	2360391.0	3401.0	2889900.	.13	36707.00	1712953.00	1.38
MAY		26730.00	26730.00	2387121.0	3465.0	2893365.	.13	38376.00	1751329.00	1.44
JUN		26663.00	26663.00	2413784.0	3671.0	2897036.	.14	39793.00	1791122.00	1.49
JUL		30396.00	30396.00	2444180.0	3068.0	2900104.	.10	47162.00	1838284.00	1.55
AUG		32048.00	32048.00	2476228.0	4858.0	2904962.	.15	51558.00	1889842.00	1.61
SEP		28726.00	28726.00	2504954.0	4834.0	2909796.	.17	47961.00	1937803.00	1.67
OCT		26523.00	26523.00	2531477.0	4670.0	2914466.	.18	45933.00	1983736.00	1.73
NOV		24655.00	24655.00	2556132.0	4478.0	2918944.	.18	44243.00	2027979.00	1.79
DEC		23864.00	23864.00	2579996.0	3934.0	2922878.	.16	44439.00	2072418.00	1.86
YEAR TOTAL		321674.00	321674.00		46404.0			493386.00		
JAN	1990	24259.00	24259.00	2604255.0	4422.0	2927300.	.18	45845.00	2118263.00	1.89
FEB		20606.00	20606.00	2624861.0	3914.0	2931214.	.19	39761.00	2158024.00	1.93
MAR		22549.00	22549.00	2647410.0	4149.0	2935363.	.18	44504.00	2202528.00	1.97
APR		21822.00	21822.00	2669232.0	2472.0	2937835.	.11	43994.00	2246522.00	2.02
MAY		22257.00	22257.00	2691489.0	2849.0	2940684.	.13	45882.00	2292404.00	2.06
JUN		23796.00	23796.00	2715285.0	3042.0	2943726.	.13	50124.00	2342528.00	2.11
JUL		24034.00	24034.00	2739319.0	4166.0	2947892.	.17	51721.00	2394249.00	2.15
AUG		21893.00	21893.00	2761212.0	3838.0	2951730.	.18	48132.00	2442381.00	2.20
SEP		21614.00	21614.00	2782826.0	3976.0	2955706.	.18	48538.00	2490919.00	2.25
OCT		23068.00	23068.00	2805894.0	2408.0	2958114.	.10	52883.00	2543802.00	2.29
NOV		23058.00	23058.00	2828952.0	2235.0	2960349.	.10	54135.00	2597937.00	2.35
DEC		22668.00	22668.00	2851620.0	2239.0	2962588.	.10	54556.00	2652493.00	2.41
YEAR TOTAL		271624.00	271624.00		39710.0			580075.00		

PRODUCTION SUMMARY REPORT

		OIL/COND.			GAS			WATER		
MON	YEAR	PRODUCTION ----BLS---	SALE BLS-	CUMULATIVE SALES BLS-	SALES -MCF-	CUMULATIVE SALES MCF-	GAS/OIL MCF/BBL	PRODUCTION ----BLS---	CUMULATIVE PROD. BLS-	WATER/OIL BLS/BBL--
JAN	1991	22099.00	22099.00	2873719.0	3847.0	2966435.	.17	54675.00	2707168.00	2.47
FEB		19411.00	19411.00	2893130.0	3329.0	2969764.	.17	49450.00	2756618.00	2.55
MAR		20689.00	20689.00	2913819.0	3507.0	2973271.	.17	54252.00	2810870.00	2.62
APR		19600.00	19600.00	2933419.0	111.0	2973382.	.01	52959.00	2863829.00	2.70
MAY		19788.00	19788.00	2953207.0	2184.0	2975566.	.11	55047.00	2918876.00	2.78
JUN		18495.00	18495.00	2971702.0	3215.0	2978781.	.17	53039.00	2971915.00	2.87
JUL		18607.00	18607.00	2990309.0	3590.0	2982371.	.19	55135.00	3027050.00	2.96
AUG		18566.00	18566.00	3008875.0	3402.0	2985773.	.18	56832.00	3083882.00	3.06
SEP		16561.00	16561.00	3025436.0	2868.0	2988641.	.17	52473.00	3136355.00	3.17
OCT		17290.00	17290.00	3042726.0	3155.0	2991796.	.18	56759.00	3193114.00	3.28
NOV		16696.00	16696.00	3059422.0	2944.0	2994740.	.18	56189.00	3249303.00	3.37
DEC		17345.00	17345.00	3076767.0	2938.0	2997678.	.17	60523.00	3309826.00	3.49
YEAR	TOTAL	225147.00	225147.00		35090.0			657333.00		
JAN	1992	17042.00	17042.00	3093809.0	891.0	2998569.	.05	61733.00	3371559.00	3.62
FEB		15401.00	15401.00	3109210.0	3079.0	3001648.	.20	57897.00	3429456.00	3.76
MAR		15827.00	15827.00	3125037.0	3245.0	3004893.	.21	61771.00	3491227.00	3.90
APR		15039.00	15039.00	3140076.0	3223.0	3008116.	.21	60954.00	3552181.00	4.05
MAY		15312.00	15312.00	3155388.0	3003.0	3011119.	.20	64472.00	3616653.00	4.21
JUN		14827.00	14827.00	3170215.0	2885.0	3014004.	.19	64909.00	3681562.00	4.38
JUL		14503.00	14503.00	3184718.0	3054.0	3017058.	.21	65979.00	3747541.00	4.55
AUG		14356.00	14356.00	3199074.0	2776.0	3019834.	.19	67962.00	3815503.00	4.73
SEP		13643.00	13643.00	3212717.0	2757.0	3022591.	.20	67213.00	3882716.00	4.93
OCT		14407.00	14407.00	3227124.0	3491.0	3026082.	.24	74022.00	3956738.00	5.14
NOV		15150.00	15150.00	3242274.0	3219.0	3029301.	.21	79224.00	4035962.00	5.23
DEC		16109.00	16109.00	3258383.0	3264.0	3032565.	.20	60876.00	4096838.00	3.78
YEAR	TOTAL	181616.00	181616.00		34887.0			787012.00		
JAN	1993	15748.00	15748.00	3274131.0	2994.0	3035559.	.19	61501.00	4158339.00	3.91
FEB		13399.00	13399.00	3287530.0	2290.0	3037849.	.17	54144.00	4212483.00	4.04
MAR		15537.00	15537.00	3303067.0	2953.0	3040802.	.19	64995.00	4277478.00	4.18
APR		14894.00	14894.00	3317961.0	3166.0	3043968.	.21	64462.00	4341940.00	4.33
MAY		15268.00	15268.00	3333229.0	3049.0	3047017.	.20	68384.00	4410324.00	4.48
JUN		15493.00	15493.00	3348722.0	3204.0	3050221.	.21	71854.00	4482178.00	4.64
JUL		14904.00	14904.00	3363626.0	3370.0	3053591.	.23	71560.00	4553738.00	4.80
AUG		16630.00	16630.00	3380256.0	3695.0	3057286.	.22	82742.00	4636480.00	4.98
SEP		15518.00	15518.00	3395774.0	3546.0	3060832.	.23	79952.00	4716432.00	5.15
OCT		16579.00	16579.00	3412353.0	3823.0	3064655.	.23	88532.00	4804964.00	5.34
NOV		18146.00	18146.00	3430499.0	2505.0	3067160.	.14	100565.00	4905529.00	5.54
DEC		19970.00	19970.00	3450469.0	3838.0	3070998.	.19	115303.00	5020832.00	5.77
YEAR	TOTAL	192086.00	192086.00		38433.0			923994.00		

PRODUCTION SUMMARY REPORT

		OIL/COND.			GAS			WATER		
MON	YEAR	PRODUCTION ----BLS---	SALE BLS-	CUMULATIVE SALES BLS-	SALES -MCF-	CUMULATIVE SALES MCF-	GAS/OIL MCF/BBL	PRODUCTION ----BLS---	CUMULATIVE PROD. BLS-	WATER/OIL BLS/BBL--
JAN	1994	19538.00	19538.00	3470007.0	3885.0	3074883.	.20	150479.00	5171311.00	7.70
FEB		16251.00	16251.00	3486258.0	3183.0	3078066.	.20	127640.00	5298951.00	7.85
MAR		15594.00	15594.00	3501852.0	3585.0	3081651.	.23	125221.00	5424172.00	8.03
APR		15082.00	15082.00	3516934.0	3628.0	3085279.	.24	124065.00	5548237.00	8.23
MAY		15581.00	15581.00	3532515.0	3816.0	3089095.	.24	131631.00	5679868.00	8.45
JUN		14268.00	14268.00	3546783.0	4093.0	3093188.	.29	124081.00	5803949.00	8.70
JUL		14191.00	14191.00	3560974.0	3310.0	3096498.	.23	127581.00	5931530.00	8.99
AUG		14051.00	14051.00	3575025.0	3919.0	3100417.	.28	131072.00	6062602.00	9.33
SEP		13089.00	13089.00	3588114.0	3396.0	3103813.	.26	127355.00	6189957.00	9.73
OCT		12398.00	12398.00	3600512.0	3305.0	3107118.	.27	126718.00	6316675.00	10.22
NOV		11208.00	11208.00	3611720.0	2901.0	3110019.	.26	115016.00	6431691.00	10.26
DEC		12309.00	12309.00	3624029.0	3432.0	3113451.	.28	127001.00	6558692.00	10.32
YEAR TOTAL		173560.00	173560.00		42453.0			1537860.00		
JAN	1995	12268.00	12268.00	3636297.0	3328.0	3116779.	.27	127228.00	6685920.00	10.37
FEB		11097.00	11097.00	3647394.0	2504.0	3119283.	.23	115718.00	6801638.00	10.43
MAR		11968.00	11968.00	3659362.0	2903.0	3122186.	.24	125432.00	6927070.00	10.48
APR		11211.00	11211.00	3670573.0	2551.0	3124737.	.23	118201.00	7045271.00	10.54
MAY		11190.00	11190.00	3681763.0	2631.0	3127368.	.24	118662.00	7163933.00	10.60
JUN		10446.00	10446.00	3692209.0	2498.0	3129866.	.24	111404.00	7275337.00	10.66
JUL		11000.00	11000.00	3703209.0	2770.0	3132636.	.25	118021.00	7393358.00	10.73
AUG		10300.00	10300.00	3713509.0	2802.0	3135438.	.27	111140.00	7504498.00	10.79
SEP		10263.00	10263.00	3723772.0	2689.0	3138127.	.26	111468.00	7615966.00	10.86
OCT		10160.00	10160.00	3733932.0	2881.0	3141008.	.28	111150.00	7727116.00	10.94
NOV		9971.00	9971.00	3743903.0	2741.0	3143749.	.27	109086.00	7836202.00	10.94
DEC		9884.00	9884.00	3753787.0	2681.0	3146430.	.27	108128.00	7944330.00	10.94
YEAR TOTAL		129758.00	129758.00		32979.0			1385638.00		
JAN	1996	9327.00	9327.00	3763114.0	2722.0	3149152.	.29	102034.00	8046364.00	10.94
FEB		8897.00	8897.00	3772011.0	2560.0	3151712.	.29	97337.00	8143701.00	10.94
MAR		8846.00	8846.00	3780857.0	1835.0	3153547.	.21	96775.00	8240476.00	10.94
APR		8941.00	8941.00	3789798.0	2694.0	3156241.	.30	97811.00	8338287.00	10.94
MAY		8702.00	8702.00	3798500.0	2434.0	3158675.	.28	95195.00	8433482.00	10.94
JUN		8395.00	8395.00	3806895.0	2567.0	3161242.	.31	91840.00	8525322.00	10.94
JUL		.00	.00	3806895.0	.0	3161242.	.31	.00	8525322.00	10.94
AUG		.00	.00	3806895.0	.0	3161242.	.31	.00	8525322.00	10.94
SEP		.00	.00	3806895.0	.0	3161242.	.31	.00	8525322.00	10.94
OCT		.00	.00	3806895.0	.0	3161242.	.31	.00	8525322.00	10.94
NOV		.00	.00	3806895.0	.0	3161242.	.31	.00	8525322.00	10.94
DEC		.00	.00	3806895.0	.0	3161242.	.31	.00	8525322.00	10.94
YEAR-T-DATE		53108.00	53108.00		14812.0			580992.00		

PRODUCTION SUMMARY REPORT

		OIL/COND.			GAS			WATER		
MON	YEAR	PRODUCTION ----BLS---	SALE BLS-	CUMULATIVE SALES BLS-	SALES -MCF-	CUMULATIVE SALES MCF-	GAS/OIL MCF/BBL	PRODUCTION ----BLS---	CUMULATIVE PROD. BLS-	WATER/OIL BLS/BBL--
TOTAL		3806895.00	3806895.00		.0			8525322.00		

APPENDIX B

HISTORY MATCHING MODEL

AND

RESULTS SUMMARY

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          WATERFLOOD DISPLACEMENT FOR E.N. WOODS LEASE
RESTART DATA
-1 -1
GRID DATA
11 10 7
GRID BLOCK LENGTHS
0 0 0 0
113. 263. 244. 375. 356. 225. 169. 300. 375. 338. 113.
113. 375. 356. 375. 300. 300. 300. 338. 300. 113.
68. 10. 202. 25. 60. 15. 85.
20. 10. 195. 22. 60. 14. 79.
GRID BLOCK LENGTH MODIFICATIONS
5*0
CAPROCK BASE DEPTHS
1
1129. 1125. 1120. 1097. 1125. 1138. 1150. 1167. 1180. 1190. 1200.
1098. 1098. 1104. 1114. 1125. 1138. 1150. 1167. 1182. 1190. 1200.
1100. 1100. 1100. 1114. 1125. 1138. 1160. 1166. 1188. 1200. 1200.
1100. 1100. 1100. 1114. 1125. 1138. 1161. 1165. 1188. 1200. 1200.
1102. 1102. 1107. 1114. 1125. 1150. 1163. 1175. 1195. 1203. 1207.
1110. 1110. 1114. 1125. 1138. 1150. 1163. 1175. 1197. 1203. 1207.
1120. 1120. 1120. 1125. 1138. 1160. 1169. 1182. 1200. 1213. 1213.
1136. 1136. 1136. 1136. 1156. 1163. 1169. 1188. 1210. 1213. 1213.
1140. 1140. 1150. 1150. 1163. 1167. 1171. 1188. 1211. 1213. 1213.
1140. 1140. 1150. 1150. 1163. 1167. 1171. 1188. 1211. 1213. 1213.
POROSITY AND PERMEABILITY
0 0 0 -1
.081 .092 .098 .112 .110 .106 .086
4.1 5.2 11.2 20.4 14.5 10.9 12.9
4.1 5.2 11.2 20.4 14.5 10.9 12.9
0.7
POROSITY AND PERMEABILITY MODIFICATIONS
5*0
TRANSMISSIBILITY MODIFICATIONS
4*0
ROCK AND PVT
1 1
SAT  KROW     KRW    KRG     KROG  PCOW PCOG
-.1  6*0.
.02  6*0.
0.1  6*0.
0.2  .0115  .0285   .0237    3*0.
0.3  .0285  .0768   .0630   .0114   2*0.
0.4  .0517  .1394   .1131   .0230   2*0.
0.5  .0731  .2394   .2208   .0394   2*0.
0.6  .1167  .3878   .3478   .0629   2*0.
0.7  .1908  .6074   .5045   .0989   2*0.
0.8  .3207  .8126   .6870   .1722   2*0.
0.9  .5112  .9852   .9139   .3097   2*0.
1.1  .7330  .9852   .9211   .4786   2*0.
ITHREE SWR(IRR)
1 .20
 PBO   PBODAT PBGRAD
1800.  4400.   0.
VSLOPE   BSLOPE  RSLOPE   PMAX  REPRS
.000046 -.0000232   0.   9014.7   0
   P     MUO    BO   RSO
  14.7  1.04  1.062  1.0
1014.7  .83   1.295  371.
2014.7  .695  1.435  636.
3014.7  .594  1.565  930.
4014.7  .51   1.695  1270.
5014.7  .449  1.827  1618.
9014.7  .203  2.35   2984.
   P     MUW    BW   RSW
  14.7  .5    1.019  0.
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1014.7  .501  1.016  0.
2014.7  .502  1.013  0.
4014.7  .505  1.007  0.
6014.7  .51   1.001  0.
9014.7  .52   .992   0.
GAS AND ROCK PROP
0
   P      MUG      BG      PSI      CR
  14.7   .008    .9358    0.0   .000003
 264.7   .0096   .067902  0.0   .000003
 514.7   .0112   .035228  0.0   .000003
1014.7   .014    .017951  0.0   .000003
2014.7   .0189   .009063  0.0   .000003
2514.7   .0208   .007266  0.0   .000003
3014.7   .0228   .006064  0.0   .000003
4014.7   .0268   .004554  0.0   .000003
5014.7   .0309   .003644  0.0   .000003
9014.7   .047    .002167  0.0   .000003
RHOSCO RHOSCW RHOSCG
46.244 62.238 .0647
EQUILIBRIUM PRESSURE INITIALIZATION/CONSTANT SATURATIONS
1 1 4400. 0.0
1800. 1800. 1800. 1800. 1800. 1800. 1800. 1800. 1800. 1800. 1800
1800. 1800. 1800. 1800. 1800. 1800. 1800. 1800. 1800. 1800. 1800
1800. 1800. 1800. 1800. 1800. 1800. 1800. 1800. 1800. 1800. 1800
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KSN1 KSM1 KCO1 KCOF
4*0
NMAX FACT1 FACT2 TMAX  WORMAX GORMAX PAMIN PAMAX
1974   1.    1.  9855.  100.  500000.  15. 10000.
KSOL MITR OMEGA TOL TOL1 DSMAX DPMAX
4    250   1.7  .1   .0   .05   100.
NUMDIS IRK THRUIN
0       0    .5
AQUIFER DATA
0
RECURRENT DATA
DATA SET #1
73 1 1
365.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
3 0
---NEW PRODUCING WELLS---
P-1    1  3  3  1  7
1.058 1.044 2.933 1.494 1.867 1.113 1.970
7*1500.
P-1    1  1      34.1        0.        0.        0.
P-2A   2 10  2  1  7
1.056 1.043 2.864 1.476 1.837 1.109 1.936
7*1500.
P-2A   2  1      50.5        0.        0.        0.
P-4    3  9  8  1  7
1.056 1.043 2.864 1.476 1.837 1.109 1.936
7*1400.
P-4    3  1      48.3        0.        0.        0.
DATA SET #2
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73 1 1
730.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 3
---CHANGE RATE OF WELLS---
P-1     1  1       28.9        0.        0.        0.
P-2A    2  1       45.3        0.        0.        0.
P-4     3  1       36.8        0.        0.        0.
DATA SET #3
73 1 1
1095.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 3
---CHANGE RATE OF WELLS---
P-1     1  1       25.7        0.        0.        0.
P-2A    2  1       40.1        0.        0.        0.
P-4     3  1       35.9        0.        0.        0.
DATA SET #4
73 1 1
1460.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 3
---CHANGE RATE OF WELLS---
P-1     1  1       23.4        0.        0.        0.
P-2A    2  1       37.6        0.        0.        0.
P-4     3  1       30.2        0.        0.        0.
DATA SET #5
73 1 1
1825.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 3
---CHANGE RATE OF WELLS---
P-1     1  1       20.7        0.        0.        0.
P-2A    2  1       25.9        0.        0.        0.
P-4     3  1       30.5        0.        0.        0.
DATA SET #6
73 1 1
2190.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 3
---CHANGE RATE OF WELLS---
P-1     1  1       25.0        0.        0.        0.
P-2A    2  1       36.4        0.        0.        0.
P-4     3  1       43.3        0.        0.        0.
DATA SET #7
31 1 1
2341.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 3
---CHANGE RATE OF WELLS---
P-1     1  1       26.6        0.        0.        0.
P-2A    2  1       27.8        0.        0.        0.
P-4     3  1       31.5        0.        0.        0.
DATA SET #8
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43 1 1
2555.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
10 0
---NEW PRODUCING AND LEASE LINE INJECTION WELLS---
P-3    4  3  8  1  7
1.116 1.088 4.886 1.992 2.774 1.228 2.950
7*1400.
P-3    4  1       21.5        0.        0.        0.
P-5    5  6  5  1  7
1.120 1.090 4.962 2.012 2.778 1.232 2.990
7*1500.
P-5    5  1       35.4        0.        0.        0.
I-70   6  2  9  1  7
1.118 1.090 4.902 2.996 2.752 1.228 2.958
7*1500.
I-70   6  2       0.      -16.6       0.        0.
I-71   7  6  10 1  7
1.132 1.100 5.390 2.122 2.970 1.256 3.204
7*1500.
I-71   7  2       0.      -28.1       0.        0.
I-72   8 11  10 1  7
1.142 1.108 5.752 2.214 3.132 1.278 3.384
7*1500.
I-72   8  2       0.      -32.6       0.        0.
I-75   9  2  5  1  7
1.118 1.090 4.902 1.996 2.752 1.224 2.958
7*1500.
I-75   9  2       0.      -45.7       0.        0.
I-76  10 1  2  1  7
1.124 1.096 5.156 2.062 2.864 1.244 3.086
7*1500.
I-76  10  2       0.      -53.9       0.        0.
I-104 11 11 5  1  7
1.124 1.096 5.156 2.062 2.864 1.244 3.086
7*1500.
I-104 11  2       0.      -89.4       0.        0.
I-204 12 11 1  1  7
1.128 1.098 5.236 2.086 2.910 1.250 3.136
7*1500.
I-204 12  2       0.      -67.2       0.        0.
I-317 13  6  1  1  7
1.132 1.100 5.390 2.112 2.970 1.236 3.204
7*1500.
I-317 13  2       0.      -81.8       0.        0.
DATA SET #9
73 1 1
2920.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
1 0
---NEW PRODUCING WELLS---
P-6   14  9  5  1  7
1.114 1.086 4.770 1.964 2.692 1.220 2.892
7*1500.
P-6   14  1      21.8        0.        0.        0.
DATA SET #10
73 1 1
3285.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 1
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---CHANGE RATE OF WELL---
P-6   14  1      20.1       0.        0.        0.
DATA SET #11
73 1 1
3650.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 1
---CHANGE RATE OF WELL---
P-6   14  1      22.7       0.        0.        0.
DATA SET #12
73 1 1
4015.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 1
---CHANGE RATE OF WELL---
P-6   14  1      30.3       0.        0.        0.
DATA SET #13
73 1 1
4380.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 1
---CHANGE RATE OF WELL---
P-6   14  1      45.5       0.        0.        0.
DATA SET #14
31 1 1
4531.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 1
---CHANGE RATE OF WELL---
P-6   14  1      34.5       0.        0.        0.
DATA SET #15
43 1 1
4745.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
2 0
---NEW PRODUCING WELLS---
P-7   15  5  8  1  7
1.112 1.086 4.748 1.958 2.682 1.220 2.880
7*1500.
P-7   15  1      36.5       0.        0.        0.
P-8   16  4  5  1  7
1.114 1.086 4.770 1.964 2.692 1.220 2.892
7*1500.
P-8   16  1      28.7       0.        0.        0.
DATA SET #16
73 1 1
5110.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
4 0
---NEW INTERIOR INJECTION WELLS---
I-9   17  6  7  1  7
1.120 1.090 4.962 2.012 2.778 1.228 2.990
7*1500.
I-9   17  2      0.      -67.6        0.        0.
```

```
I-10  18  8  4  1  7
1.114 1.086 4.770 1.964 2.692 1.220 2.892
7*1500.
I-10  18  2      0.      -67.6        0.        0.
I-11  19  5  4  1  7
1.112 1.084 4.710 1.948 2.666 1.218 2.862
7*1500.
I-11  19  2      0.      -67.6        0.        0.
I-12R 20  8  7  1  7
1.116 1.088 4.852 1.984 2.728 1.226 2.934
7*1500.
I-12R 20  2      0.      -67.6        0.        0.
DATA SET #17
61 1 1
5414.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 4
---CHANGE RATE OF INJECTION WELLS---
I-9   17  2      0.      -101.8       0.        0.
I-10  18  2      0.      -101.8       0.        0.
I-11  19  2      0.      -101.8       0.        0.
I-12R 20  2      0.      -101.8       0.        0.
DATA SET #18
13 1 1
5475.
1 1 1 1 0 0
5. 1. 20
WELL INFORMATION
1 0
---NEW PRODUCING WELL---
P-13  21  6  3  1  7
1.059 1.044 3.929 1.493 1.866 1.113 1.968
7*1500.
P-13  21  1     400.6       0.       0.        0.
DATA SET #19
73 1 1
5840.
1 1 1 1 0 0
5. 1. 20
WELL INFORMATION
0 1
---CHANGE RATE OF WELL---
P-13  21  1     402.4       0.       0.        0.
DATA SET #20
73 1 1
6205.
1 1 1 1 0 0
5. 1. 20
WELL INFORMATION
0 1
---CHANGE RATE OF WELL---
P-13  21  1     502.6       0.       0.        0.
DATA SET #21
73 1 1
6570.
1 1 1 1 0 0
5. 1. 20
WELL INFORMATION
0 1
---CHANGE RATE OF WELL---
P-13  21  1     448.2       0.       0.        0.
DATA SET #22
73 1 1
6935.
```

```
1 1 1 1 0 0
5. 1. 20
WELL INFORMATION
0 1
---CHANGE RATE OF WELL---
P-13  21  1     474.7       0.       0.        0.
DATA SET #23
73 1 1
7300.
1 1 1 1 0 0
5. 1. 20
WELL INFORMATION
0 1
---CHANGE RATE OF WELL---
P-13  21  1     400.6       0.       0.        0.
DATA SET #24
73 1 1
7665.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
2 0
---NEW LEASE LINE INJECTION WELLS---
I-329 22  4  1  1  7
1.124 1.096 5.156 2.062 2.864 1.244 3.086
7*1500.
I-329 22  2      0.    -76.2       0.        0.
I-330 23  9  1  1  7
1.124 1.096 5.156 2.062 2.864 1.244 3.086
7*1500.
I-330 23  2      0.    -76.2       0.        0.
DATA SET #25
73 1 1
8030.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
1 0
---NEW INTERIOR INJECTION WELL---
I-14  24  4  7  1  7
1.114 1.086 4.790 1.968 2.700 1.222 2.902
7*1500.
I-14  24  2      0.    -86.2       0.        0.
DATA SET #26
73 1 1
8395.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
1 0
---NEW PRODUCING WELL---
P-15  25  4  2  1  7
1.112 1.086 4.728 1.952 2.674 1.218 2.872
7*1500.
P-15  25  1     49.8     0.       0.        0.
DATA SET #27
73 1 1
8760.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
0 1
---CHANGE RATE OF WELL---
P-15  25  1     50.6     0.       0.        0.
DATA SET #28
73 1 1
```

```
9125.
1 1 1 1 0 0
5. 1. 20
WELL INFORMATION
3 0
---NEW PRODUCING WELLS---
P-16  26  8  2  1  7
1.114 1.086 4.770 1.964 2.692 1.220 2.892
7*1500.
P-16  26  1     38.5     0.       0.       0.
P-17  27  3  4  1  7
1.116 1.088 4.846 1.982 2.726 1.226 2.930
7*1500.
P-17  27  1     34.7     0.       0.       0.
P-18  28 10  6  1  7
1.114 1.088 4.808 1.972 2.708 1.222 2.912
7*1500.
P-18  28  1     36.6     0.       0.       0.
DATA SET #29
73 1 1
9490.
1 1 1 1 0 0
5. 1. 20
WELL INFORMATION
0 1
---CONVERT PRODUCING WELL P-17 TO INJECTION WELL I-17---
I-17  27  2      0.  -37.3      0.         0.
DATA SET #30
73 1 1
9855.
1 1 1 1 0 0
5. 1. 20
WELL INFORMATION
0 1
---CHANGE RATE OF INJECTION WELL I-17---
I-17  27  2      0.  -21.7      0.         0.
```

```
*****************************************************************
*                                                               *
*                                                               *
*                          BOAST II:                            *
*                 BLACK OIL APPLIED SIMULATION TOOL             *
*                          (RELEASE 1.1)                        *
*                                                               *
*                                                               *
*****************************************************************
```

```
*******************************************************************************
*                                                                             *
*          WATERFLOOD DISPLACEMENT FOR E.N. WOODS LEASE                       *
*                                                                             *
*******************************************************************************
```

REDIMENSIONING INFORMATION:

MAX X-DIRECTION GRID BLOCKS	15
MAX Y-DIRECTION GRID BLOCKS	15
MAX Z-DIRECTION GRID BLOCKS	7
MAX ROCK REGIONS	3
MAX ROCK REGION TABLE ENTRIES	25
MAX PVT REGIONS	3
MAX PVT REGION TABLE ENTRIES	25
MAX WELLS	50
MAX TIME STEPS	20000
MAX RESTART RECORDS	5
TOTAL BLOCKS USING 1D DIRECT SOLN METHODS	13
TOTAL BLOCKS USING 2D OR 3D DIRECT SOLN METHODS	1
TOTAL BLOCKS USING ITERATIVE SOLN METHOD	1575
MAX NO OF BLOCKS IN 1D FOR LSOR	13
MAX NO OF BLOCKS IN 2D FOR L2SOR	1

```
*******************************************************************************
*                                                                             *
*          WATERFLOOD DISPLACEMENT FOR E.N. WOODS LEASE                       *
*                                                                             *
*******************************************************************************
```

***** RESTART OPTION *****

RESTART OPTION HAS NOT BEEN ACTIVATED.

***** INITIALIZATION DATA *****

GRID SIZE (DX) IN COLUMN 1 IS INITIALLY SET AT 113.00 FOR ALL NODES
GRID SIZE (DX) IN COLUMN 2 IS INITIALLY SET AT 263.00 FOR ALL NODES
GRID SIZE (DX) IN COLUMN 3 IS INITIALLY SET AT 244.00 FOR ALL NODES
GRID SIZE (DX) IN COLUMN 4 IS INITIALLY SET AT 375.00 FOR ALL NODES
GRID SIZE (DX) IN COLUMN 5 IS INITIALLY SET AT 356.00 FOR ALL NODES
GRID SIZE (DX) IN COLUMN 6 IS INITIALLY SET AT 225.00 FOR ALL NODES
GRID SIZE (DX) IN COLUMN 7 IS INITIALLY SET AT 169.00 FOR ALL NODES
GRID SIZE (DX) IN COLUMN 8 IS INITIALLY SET AT 300.00 FOR ALL NODES
GRID SIZE (DX) IN COLUMN 9 IS INITIALLY SET AT 375.00 FOR ALL NODES
GRID SIZE (DX) IN COLUMN 10 IS INITIALLY SET AT 338.00 FOR ALL NODES
GRID SIZE (DX) IN COLUMN 11 IS INITIALLY SET AT 113.00 FOR ALL NODES

GRID SIZE (DY) IN ROW 1 IS INITIALLY SET AT 113.00 FOR ALL NODES
GRID SIZE (DY) IN ROW 2 IS INITIALLY SET AT 375.00 FOR ALL NODES
GRID SIZE (DY) IN ROW 3 IS INITIALLY SET AT 356.00 FOR ALL NODES
GRID SIZE (DY) IN ROW 4 IS INITIALLY SET AT 375.00 FOR ALL NODES

```
GRID SIZE (DY) IN ROW      5 IS INITIALLY SET AT  300.00 FOR ALL NODES
GRID SIZE (DY) IN ROW      6 IS INITIALLY SET AT  300.00 FOR ALL NODES
GRID SIZE (DY) IN ROW      7 IS INITIALLY SET AT  300.00 FOR ALL NODES
GRID SIZE (DY) IN ROW      8 IS INITIALLY SET AT  338.00 FOR ALL NODES
GRID SIZE (DY) IN ROW      9 IS INITIALLY SET AT  300.00 FOR ALL NODES
GRID SIZE (DY) IN ROW     10 IS INITIALLY SET AT  113.00 FOR ALL NODES

GRID SIZE (DZ) IN LAYER    1 IS INITIALLY SET AT   68.00 FOR ALL NODES
GRID SIZE (DZ) IN LAYER    2 IS INITIALLY SET AT   10.00 FOR ALL NODES
GRID SIZE (DZ) IN LAYER    3 IS INITIALLY SET AT  202.00 FOR ALL NODES
GRID SIZE (DZ) IN LAYER    4 IS INITIALLY SET AT   25.00 FOR ALL NODES
GRID SIZE (DZ) IN LAYER    5 IS INITIALLY SET AT   60.00 FOR ALL NODES
GRID SIZE (DZ) IN LAYER    6 IS INITIALLY SET AT   15.00 FOR ALL NODES
GRID SIZE (DZ) IN LAYER    7 IS INITIALLY SET AT   85.00 FOR ALL NODES

GRID SIZE (DZNET) IN LAYER    1 IS INITIALLY SET AT   20.00 FOR ALL NODES
GRID SIZE (DZNET) IN LAYER    2 IS INITIALLY SET AT   10.00 FOR ALL NODES
GRID SIZE (DZNET) IN LAYER    3 IS INITIALLY SET AT  195.00 FOR ALL NODES
GRID SIZE (DZNET) IN LAYER    4 IS INITIALLY SET AT   22.00 FOR ALL NODES
GRID SIZE (DZNET) IN LAYER    5 IS INITIALLY SET AT   60.00 FOR ALL NODES
GRID SIZE (DZNET) IN LAYER    6 IS INITIALLY SET AT   14.00 FOR ALL NODES
GRID SIZE (DZNET) IN LAYER    7 IS INITIALLY SET AT   79.00 FOR ALL NODES

********** DEPTHS TO GRID BLOCK TOPS **********
```

K = 1

1129.	1125.	1120.	1097.	1125.	1138.	1150.	1167.	1180.	1190.	1200.
1098.	1098.	1104.	1114.	1125.	1138.	1150.	1167.	1182.	1190.	1200.
1100.	1100.	1100.	1114.	1125.	1138.	1160.	1166.	1188.	1200.	1200.
1100.	1100.	1100.	1114.	1125.	1138.	1161.	1165.	1188.	1200.	1200.
1102.	1102.	1107.	1114.	1125.	1150.	1163.	1175.	1195.	1203.	1207.
1110.	1110.	1114.	1125.	1138.	1150.	1163.	1175.	1197.	1203.	1207.
1120.	1120.	1120.	1125.	1138.	1160.	1169.	1182.	1200.	1213.	1213.
1136.	1136.	1136.	1136.	1156.	1163.	1169.	1188.	1210.	1213.	1213.
1140.	1140.	1150.	1150.	1163.	1167.	1171.	1188.	1211.	1213.	1213.
1140.	1140.	1150.	1150.	1163.	1167.	1171.	1188.	1211.	1213.	1213.

K = 2

1197.	1193.	1188.	1165.	1193.	1206.	1218.	1235.	1248.	1258.	1268.
1166.	1166.	1172.	1182.	1193.	1206.	1218.	1235.	1250.	1258.	1268.
1168.	1168.	1168.	1182.	1193.	1206.	1228.	1234.	1256.	1268.	1268.
1168.	1168.	1168.	1182.	1193.	1206.	1229.	1233.	1256.	1268.	1268.
1170.	1170.	1175.	1182.	1193.	1218.	1231.	1243.	1263.	1271.	1275.
1178.	1178.	1182.	1193.	1206.	1218.	1231.	1243.	1265.	1271.	1275.
1188.	1188.	1188.	1193.	1206.	1228.	1237.	1250.	1268.	1281.	1281.
1204.	1204.	1204.	1204.	1224.	1231.	1237.	1256.	1278.	1281.	1281.
1208.	1208.	1218.	1218.	1231.	1235.	1239.	1256.	1279.	1281.	1281.
1208.	1208.	1218.	1218.	1231.	1235.	1239.	1256.	1279.	1281.	1281.

K = 3

1207.	1203.	1198.	1175.	1203.	1216.	1228.	1245.	1258.	1268.	1278.
1176.	1176.	1182.	1192.	1203.	1216.	1228.	1245.	1260.	1268.	1278.
1178.	1178.	1178.	1192.	1203.	1216.	1238.	1244.	1266.	1278.	1278.
1178.	1178.	1178.	1192.	1203.	1216.	1239.	1243.	1266.	1278.	1278.
1180.	1180.	1185.	1192.	1203.	1228.	1241.	1253.	1273.	1281.	1285.
1188.	1188.	1192.	1203.	1216.	1228.	1241.	1253.	1275.	1281.	1285.
1198.	1198.	1198.	1203.	1216.	1238.	1247.	1260.	1278.	1291.	1291.
1214.	1214.	1214.	1214.	1234.	1241.	1247.	1266.	1288.	1291.	1291.

1218.	1218.	1228.	1228.	1241.	1245.	1249.	1266.	1289.	1291.	1291.
1218.	1218.	1228.	1228.	1241.	1245.	1249.	1266.	1289.	1291.	1291.

K = 4

1409.	1405.	1400.	1377.	1405.	1418.	1430.	1447.	1460.	1470.	1480.
1378.	1378.	1384.	1394.	1405.	1418.	1430.	1447.	1462.	1470.	1480.
1380.	1380.	1380.	1394.	1405.	1418.	1440.	1446.	1468.	1480.	1480.
1380.	1380.	1380.	1394.	1405.	1418.	1441.	1445.	1468.	1480.	1480.
1382.	1382.	1387.	1394.	1405.	1430.	1443.	1455.	1475.	1483.	1487.
1390.	1390.	1394.	1405.	1418.	1430.	1443.	1455.	1477.	1483.	1487.
1400.	1400.	1400.	1405.	1418.	1440.	1449.	1462.	1480.	1493.	1493.
1416.	1416.	1416.	1416.	1436.	1443.	1449.	1468.	1490.	1493.	1493.
1420.	1420.	1430.	1430.	1443.	1447.	1451.	1468.	1491.	1493.	1493.
1420.	1420.	1430.	1430.	1443.	1447.	1451.	1468.	1491.	1493.	1493.

K = 5

1434.	1430.	1425.	1402.	1430.	1443.	1455.	1472.	1485.	1495.	1505.
1403.	1403.	1409.	1419.	1430.	1443.	1455.	1472.	1487.	1495.	1505.
1405.	1405.	1405.	1419.	1430.	1443.	1465.	1471.	1493.	1505.	1505.
1405.	1405.	1405.	1419.	1430.	1443.	1466.	1470.	1493.	1505.	1505.
1407.	1407.	1412.	1419.	1430.	1455.	1468.	1480.	1500.	1508.	1512.
1415.	1415.	1419.	1430.	1443.	1455.	1468.	1480.	1502.	1508.	1512.
1425.	1425.	1425.	1430.	1443.	1465.	1474.	1487.	1505.	1518.	1518.
1441.	1441.	1441.	1441.	1461.	1468.	1474.	1493.	1515.	1518.	1518.
1445.	1445.	1455.	1455.	1468.	1472.	1476.	1493.	1516.	1518.	1518.
1445.	1445.	1455.	1455.	1468.	1472.	1476.	1493.	1516.	1518.	1518.

K = 6

1494.	1490.	1485.	1462.	1490.	1503.	1515.	1532.	1545.	1555.	1565.
1463.	1463.	1469.	1479.	1490.	1503.	1515.	1532.	1547.	1555.	1565.
1465.	1465.	1465.	1479.	1490.	1503.	1525.	1531.	1553.	1565.	1565.
1465.	1465.	1465.	1479.	1490.	1503.	1526.	1530.	1553.	1565.	1565.
1467.	1467.	1472.	1479.	1490.	1515.	1528.	1540.	1560.	1568.	1572.
1475.	1475.	1479.	1490.	1503.	1515.	1528.	1540.	1562.	1568.	1572.
1485.	1485.	1485.	1490.	1503.	1525.	1534.	1547.	1565.	1578.	1578.
1501.	1501.	1501.	1501.	1521.	1528.	1534.	1553.	1575.	1578.	1578.
1505.	1505.	1515.	1515.	1528.	1532.	1536.	1553.	1576.	1578.	1578.
1505.	1505.	1515.	1515.	1528.	1532.	1536.	1553.	1576.	1578.	1578.

K = 7

1509.	1505.	1500.	1477.	1505.	1518.	1530.	1547.	1560.	1570.	1580.
1478.	1478.	1484.	1494.	1505.	1518.	1530.	1547.	1562.	1570.	1580.
1480.	1480.	1480.	1494.	1505.	1518.	1540.	1546.	1568.	1580.	1580.
1480.	1480.	1480.	1494.	1505.	1518.	1541.	1545.	1568.	1580.	1580.
1482.	1482.	1487.	1494.	1505.	1530.	1543.	1555.	1575.	1583.	1587.
1490.	1490.	1494.	1505.	1518.	1530.	1543.	1555.	1577.	1583.	1587.
1500.	1500.	1500.	1505.	1518.	1540.	1549.	1562.	1580.	1593.	1593.
1516.	1516.	1516.	1516.	1536.	1543.	1549.	1568.	1590.	1593.	1593.
1520.	1520.	1530.	1530.	1543.	1547.	1551.	1568.	1591.	1593.	1593.
1520.	1520.	1530.	1530.	1543.	1547.	1551.	1568.	1591.	1593.	1593.

POROSITY IN LAYER 1 IS INITIALLY SET AT .08100 FOR ALL NODES

POROSITY IN LAYER 2 IS INITIALLY SET AT .09200 FOR ALL NODES

POROSITY IN LAYER 3 IS INITIALLY SET AT .09800 FOR ALL NODES

POROSITY IN LAYER 4 IS INITIALLY SET AT .11200 FOR ALL NODES

POROSITY IN LAYER 5 IS INITIALLY SET AT .11000 FOR ALL NODES

POROSITY IN LAYER 6 IS INITIALLY SET AT .10600 FOR ALL NODES

POROSITY IN LAYER 7 IS INITIALLY SET AT .08600 FOR ALL NODES

PERMEABILITY (KX) IN LAYER 1 IS INITIALLY SET AT 4.10 FOR ALL NODES

PERMEABILITY (KX) IN LAYER 2 IS INITIALLY SET AT 5.20 FOR ALL NODES

PERMEABILITY (KX) IN LAYER 3 IS INITIALLY SET AT 11.20 FOR ALL NODES

PERMEABILITY (KX) IN LAYER 4 IS INITIALLY SET AT 20.40 FOR ALL NODES

PERMEABILITY (KX) IN LAYER 5 IS INITIALLY SET AT 14.50 FOR ALL NODES

PERMEABILITY (KX) IN LAYER 6 IS INITIALLY SET AT 10.90 FOR ALL NODES

PERMEABILITY (KX) IN LAYER 7 IS INITIALLY SET AT 12.90 FOR ALL NODES

PERMEABILITY (KY) IN LAYER 1 IS INITIALLY SET AT 4.10 FOR ALL NODES

PERMEABILITY (KY) IN LAYER 2 IS INITIALLY SET AT 5.20 FOR ALL NODES

PERMEABILITY (KY) IN LAYER 3 IS INITIALLY SET AT 11.20 FOR ALL NODES

PERMEABILITY (KY) IN LAYER 4 IS INITIALLY SET AT 20.40 FOR ALL NODES

PERMEABILITY (KY) IN LAYER 5 IS INITIALLY SET AT 14.50 FOR ALL NODES

PERMEABILITY (KY) IN LAYER 6 IS INITIALLY SET AT 10.90 FOR ALL NODES

PERMEABILITY (KY) IN LAYER 7 IS INITIALLY SET AT 12.90 FOR ALL NODES

PERMEABILITY (KZ) IS INITIALLY SET AT .7000 FOR ALL NODES

1

***** EMPIRICAL DATA TABLES *****

*** NUMBER OF REGIONS ***
ROCK 1
PVT 1

1

ROCK REGION # 1

SATURATION	KROT	KRW	KRG	KROG	PCOW (PSI)	PCGO (PSI)
-.1000	.0000	.0000	.0000	.0000	.0000	.0000
.0200	.0000	.0000	.0000	.0000	.0000	.0000
.1000	.0000	.0000	.0000	.0000	.0000	.0000
.2000	.0115	.0285	.0237	.0000	.0000	.0000
.3000	.0285	.0768	.0630	.0114	.0000	.0000
.4000	.0517	.1394	.1131	.0230	.0000	.0000
.5000	.0731	.2394	.2208	.0394	.0000	.0000
.6000	.1167	.3878	.3478	.0629	.0000	.0000
.7000	.1908	.6074	.5045	.0989	.0000	.0000
.8000	.3207	.8126	.6870	.1722	.0000	.0000
.9000	.5112	.9852	.9139	.3097	.0000	.0000
1.1000	.7330	.9852	.9211	.4786	.0000	.0000

THE THREE-PHASE REL. PERM. CALC. IS USED.
IRREDUCIBLE WATER SATURATION IS .2000

1

PVT REGION # 1

BUBBLE POINT PARAMETERS:
BUBBLE POINT PRESSURE (PSI) 1800.000
BUBBLE POINT DEPTH (FT) 4400.000
BUBBLE POINT GRADIENT (PSI/FT) .000

VSLOPE (CP/PSI)	BSLOPE (RB/STB/PSI)	RSLOPE (1/PSI)	PMAX (PSI)	REPRS
.460E-04	-.232E-04	.00	9014.70	0

**** SATURATED OIL PVT PROPERTIES ****

PRESSURE (PSI)	VISCOSITY (CP)	FVF (RB/STB)	SOLN. GAS (SCF/STB)

14.7	1.0400	1.0620	1.00
1014.7	.8300	1.2950	371.00
2014.7	.6950	1.4350	636.00
3014.7	.5940	1.5650	930.00
4014.7	.5100	1.6950	1270.00
5014.7	.4490	1.8270	1618.00
9014.7	.2030	2.3500	2984.00

**** WATER PVT PROPERTIES ***

PRESSURE (PSI)	VISCOSITY (CP)	FVF (RB/STB)	SOLN. GAS (SCF/STB)
14.7	.5000	1.0190	.00
1014.7	.5010	1.0160	.00
2014.7	.5020	1.0130	.00
4014.7	.5050	1.0070	.00
6014.7	.5100	1.0010	.00
9014.7	.5200	.9920	.00

**** GAS PVT AND ROCK COMP. ****

PRESSURE (PSI)	VISCOSITY (CP)	FVF (RCF/SCF)	PSEUDO-PRS (PSIA**2/CP)	ROCK COMP. (1/PSI)
14.7	.0080	.9358E+00	.0000E+00	.300E-05
264.7	.0096	.6790E-01	.0000E+00	.300E-05
514.7	.0112	.3523E-01	.0000E+00	.300E-05
1014.7	.0140	.1795E-01	.0000E+00	.300E-05
2014.7	.0189	.9063E-02	.0000E+00	.300E-05
2514.7	.0208	.7266E-02	.0000E+00	.300E-05
3014.7	.0228	.6064E-02	.0000E+00	.300E-05
4014.7	.0268	.4554E-02	.0000E+00	.300E-05
5014.7	.0309	.3644E-02	.0000E+00	.300E-05
9014.7	.0470	.2167E-02	.0000E+00	.300E-05

*** DENSITIES AT STD. CONDITIONS ***

OIL (LBM/SCF)	WATER (LBM/SCF)	GAS (LBM/SCF)
46.2440	62.2380	.0647

***** SLOPES FOR COMPRESSIBILITY CALCULATIONS ****

PRESSURE (PSI)	BO (RB/STB)	DBO/DP (RB/STB/PSI)	RSO (CF/CF)	DRSO/DP (1/PSI)
1014.7	1.2950	.2330E-03	66.1	.6589E-01
2014.7	1.4350	.1400E-03	113.3	.4719E-01
3014.7	1.5650	.1300E-03	165.6	.5236E-01
4014.7	1.6950	.1300E-03	226.2	.6055E-01
5014.7	1.8270	.1320E-03	288.1	.6198E-01
9014.7	2.3500	.1307E-03	531.4	.6082E-01

PRESSURE (PSI)	BW (RB/STB)	DBW/DP (RB/STB/PSI)	RSW (CF/CF)	DRSW/DP (1/PSI)
1014.7	1.0160	-.3000E-05	.0	.0000E+00
2014.7	1.0130	-.3000E-05	.0	.0000E+00
4014.7	1.0070	-.3000E-05	.0	.0000E+00
6014.7	1.0010	-.3000E-05	.0	.0000E+00
9014.7	.9920	-.3000E-05	.0	.0000E+00

PRESSURE (PSI)	BG (RCF/SCF)	DBG/DP (RCF/SCF/PSI)
264.7	.6790E-01	-.3472E-02
514.7	.3523E-01	-.1307E-03
1014.7	.1795E-01	-.3455E-04
2014.7	.9063E-02	-.8888E-05
2514.7	.7266E-02	-.3594E-05
3014.7	.6064E-02	-.2404E-05
4014.7	.4554E-02	-.1510E-05
5014.7	.3644E-02	-.9100E-06
9014.7	.2167E-02	-.3693E-06

RUN CONTROL PARAMETERS:

```
MAXIMUM NUMBER OF TIME-STEPS = 1974
FACTOR FOR INCREASING DELT =     1.000   WHEN DSMAX AND DPMAX NOT EXCEEDED.
FACTOR FOR DECREASING DELT =     1.000   WHEN DSMAX OR DPMAX IS EXCEEDED.
MAXIMUM SIMULATION TIME =   9855.000
MAXIMUM RESERVOIR WOR/TIME-STEP =    100. STB/STB
MAXIMUM RESERVOIR GOR/TIME-STEP = 500000. SCF/STB
MINIMUM AVERAGE RESERVOIR PRESSURE/TIME-STEP =     15.
MAXIMUM AVERAGE RESERVOIR PRESSURE/TIME-STEP =  10000.
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SOLUTION METHOD IS LSORZ:
     MAXIMUM NUMBER OF ITERATIONS        (MITER) =        250
     INITIAL ACCELERATION PARAMETER      (OMEGA) =     1.7000
     MAXIMUM PRESSURE RESIDUAL             (TOL) =      .1000
     PARAMETER FOR CHANGING OMEGA         (TOL1) =      .0000

AUTOMATIC TIME STEP CRITERIA:
     MAXIMUM ALLOWED SATURATION CHANGE (DSMAX) =       .0500
     MAXIMUM ALLOWED PRESSURE CHANGE   (DPMAX) =    100.0000


IMPES FORMULATION SELECTED;  SINGLE-POINT UPSTREAM WEIGHTING.
1
                                          *********************
                                          *   WELL   UPDATE   *
                                          *********************

     RESERVOIR CONTAINS THE FOLLOWING RATE NODES:
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WELL	NO.	NODE	OIL(STBD)	WATER(RBD)	GAS(MCFD)	TOTAL(RBD)	BHFP(PSIA)	PID	ALIT	BLIT
P-1	1	3 3 1	34.10	.00	.00	.00	1500.00	1.0580	.000E+00	.000E+00
P-1	1	3 3 2	34.10	.00	.00	.00	1500.00	1.0440	.000E+00	.000E+00
P-1	1	3 3 3	34.10	.00	.00	.00	1500.00	2.9330	.000E+00	.000E+00
P-1	1	3 3 4	34.10	.00	.00	.00	1500.00	1.4940	.000E+00	.000E+00
P-1	1	3 3 5	34.10	.00	.00	.00	1500.00	1.8670	.000E+00	.000E+00
P-1	1	3 3 6	34.10	.00	.00	.00	1500.00	1.1130	.000E+00	.000E+00
P-1	1	3 3 7	34.10	.00	.00	.00	1500.00	1.9700	.000E+00	.000E+00
P-2A	2	10 2 1	50.50	.00	.00	.00	1500.00	1.0560	.000E+00	.000E+00
P-2A	2	10 2 2	50.50	.00	.00	.00	1500.00	1.0430	.000E+00	.000E+00
P-2A	2	10 2 3	50.50	.00	.00	.00	1500.00	2.8640	.000E+00	.000E+00
P-2A	2	10 2 4	50.50	.00	.00	.00	1500.00	1.4760	.000E+00	.000E+00
P-2A	2	10 2 5	50.50	.00	.00	.00	1500.00	1.8370	.000E+00	.000E+00
P-2A	2	10 2 6	50.50	.00	.00	.00	1500.00	1.1090	.000E+00	.000E+00
P-2A	2	10 2 7	50.50	.00	.00	.00	1500.00	1.9360	.000E+00	.000E+00
P-4	3	9 8 1	48.30	.00	.00	.00	1400.00	1.0560	.000E+00	.000E+00
P-4	3	9 8 2	48.30	.00	.00	.00	1400.00	1.0430	.000E+00	.000E+00
P-4	3	9 8 3	48.30	.00	.00	.00	1400.00	2.8640	.000E+00	.000E+00
P-4	3	9 8 4	48.30	.00	.00	.00	1400.00	1.4760	.000E+00	.000E+00
P-4	3	9 8 5	48.30	.00	.00	.00	1400.00	1.8370	.000E+00	.000E+00
P-4	3	9 8 6	48.30	.00	.00	.00	1400.00	1.1090	.000E+00	.000E+00
P-4	3	9 8 7	48.30	.00	.00	.00	1400.00	1.9360	.000E+00	.000E+00

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BLOCK   3  3  1 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     1
BLOCK   3  3  2 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     1
BLOCK   3  3  3 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     1
BLOCK   3  3  4 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     1
BLOCK   3  3  5 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     1
BLOCK   3  3  6 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     1
BLOCK   3  3  7 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     1
BLOCK  10  2  1 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     2
BLOCK  10  2  2 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     2
BLOCK  10  2  3 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     2
BLOCK  10  2  4 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     2
BLOCK  10  2  5 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     2
BLOCK  10  2  6 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     2
BLOCK  10  2  7 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     2
BLOCK   9  8  1 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     3
BLOCK   9  8  2 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     3
BLOCK   9  8  3 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     3
BLOCK   9  8  4 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     3
BLOCK   9  8  5 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     3
BLOCK   9  8  6 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     3
BLOCK   9  8  7 CONTAINS THE OIL RATE SPECIFIED PRODUCING WELL NUMBER     3
1
******* INITIAL FLUID VOLUMES *******


LAYER  1 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                    1.3367
     WATER IN PLACE (MILLION STB)                   .4925
     SOLUTION GAS IN PLACE (BILLION SCF)            .7741
     FREE GAS IN PLACE (BILLION SCF)                .0000


LAYER  2 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                     .7593
     WATER IN PLACE (MILLION STB)                   .2797
     SOLUTION GAS IN PLACE (BILLION SCF)            .4397
     FREE GAS IN PLACE (BILLION SCF)                .0000


LAYER  3 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                   15.7814
     WATER IN PLACE (MILLION STB)                  5.8106
     SOLUTION GAS IN PLACE (BILLION SCF)           9.1389
     FREE GAS IN PLACE (BILLION SCF)                .0000
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LAYER  4 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                    2.0350
     WATER IN PLACE (MILLION STB)                   .7492
     SOLUTION GAS IN PLACE (BILLION SCF)           1.1784
     FREE GAS IN PLACE (BILLION SCF)                .0000

LAYER  5 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                    5.4518
     WATER IN PLACE (MILLION STB)                  2.0069
     SOLUTION GAS IN PLACE (BILLION SCF)           3.1571
     FREE GAS IN PLACE (BILLION SCF)                .0000

LAYER  6 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                    1.2259
     WATER IN PLACE (MILLION STB)                   .4513
     SOLUTION GAS IN PLACE (BILLION SCF)            .7099
     FREE GAS IN PLACE (BILLION SCF)                .0000

LAYER  7 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                    5.6136
     WATER IN PLACE (MILLION STB)                  2.0660
     SOLUTION GAS IN PLACE (BILLION SCF)           3.2508
     FREE GAS IN PLACE (BILLION SCF)                .0000

TOTAL INITIAL FLUID VOLUMES IN RESERVOIR:
     OIL IN PLACE (MILLION STB)                   32.2037
     WATER IN PLACE (MILLION STB)                 11.8562
     SOLUTION GAS IN PLACE (BILLION SCF)          18.6488
     FREE GAS IN PLACE (BILLION SCF)                .0000
```

1

******* INITIAL ARRAYS *******

***** RESERVOIR PRESSURE DISTRIBUTION *****

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.
2	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.
3	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.
4	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.
5	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.
6	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.
7	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.
8	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.
9	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.
10	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.	1814.

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.
2	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.
3	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.
4	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.
5	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.
6	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.
7	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.
8	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.
9	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.

10	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.	1849.

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.
2	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.
3	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.
4	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.
5	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.
6	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.
7	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.
8	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.
9	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.
10	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.	1853.

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.
2	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.
3	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.
4	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.
5	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.
6	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.
7	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.
8	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.
9	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.
10	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.	1864.

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.
2	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.
3	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.
4	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.
5	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.
6	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.
7	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.
8	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.
9	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.
10	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.	1867.

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.
2	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.
3	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.
4	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.
5	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.
6	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.
7	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.
8	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.
9	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.
10	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.	1881.

********* OIL SATURATION *********

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
2	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
3	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
4	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
5	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
6	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
7	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
8	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
9	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
10	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
2	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
3	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
4	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790

5	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
6	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
7	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
8	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
9	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
10	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
2	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
3	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
4	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
5	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
6	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
7	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
8	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
9	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
10	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
2	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
3	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
4	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
5	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
6	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
7	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
8	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
9	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
10	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
2	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
3	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
4	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
5	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
6	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
7	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
8	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
9	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
10	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
2	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
3	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
4	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
5	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
6	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
7	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
8	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
9	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
10	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
2	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
3	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
4	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
5	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
6	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
7	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
8	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
9	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790
10	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790	.790

******** WATER SATURATION *********

K = 1

	1	2	3	4	5	6	7	8	9	10	11

1	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
2	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
3	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
4	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
5	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
6	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
7	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
8	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
9	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
10	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
2	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
3	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
4	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
5	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
6	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
7	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
8	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
9	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
10	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
2	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
3	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
4	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
5	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
6	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
7	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
8	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
9	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
10	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
2	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
3	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
4	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
5	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
6	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
7	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
8	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
9	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
10	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
2	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
3	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
4	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
5	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
6	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
7	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
8	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
9	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
10	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
2	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
3	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
4	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
5	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
6	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
7	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
8	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
9	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
10	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210

K = 7

	1	2	3	4	5	6	7	8	9	10	11

1	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
2	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
3	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
4	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
5	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
6	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
7	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
8	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
9	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210
10	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210	.210

********* GAS SATURATION *********

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
6	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
7	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
10	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
6	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
7	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
10	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
6	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
7	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
10	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
6	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
7	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
10	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
6	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
7	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

10	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
6	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
7	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
10	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
3	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
4	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
5	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
6	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
7	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
10	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

***** BUBBLE POINT PRESSURE DISTRIBUTION *****

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

********** END OF INITIALIZATION **********

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*****************************************************************************
*                                                                           *
*          WATERFLOOD DISPLACEMENT FOR E.N. WOODS LEASE                     *
*                                                                           *
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*                                       *
*  WELL REPORT: BOAST II (RELEASE 1.1)  *
*                                       *
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********** WELL REPORT FOR TIME STEP NUMBER *** ELAPSED TIME = 9855.000 DAYS FROM BEGINNING OF SIMULATION **********

WELL #	ID	LOCATION I	J	K	CALC BHFP	SPEC BHFP	SPEC PI	RATE OIL STB/D	GAS MCF/D	WATER STB/D	GOR	WOR	CUMULATIVE OIL MSTB	GAS MMCF	WATER MSTB
1	P-1	3	3	1	1457.	1500.	1.058	3.4	3.	.1	766.0	.015	32.0	18.	1.7
1	P-1	3	3	2	1469.	1500.	1.044	3.5	2.	.1	518.7	.028	29.8	17.	2.1
1	P-1	3	3	3	1511.	1500.	2.933	6.9	3.	1.2	504.6	.178	68.5	38.	11.3
1	P-1	3	3	4	1548.	1500.	1.494	2.6	1.	1.4	514.2	.557	29.7	17.	8.7
1	P-1	3	3	5	1563.	1500.	1.867	4.3	2.	1.1	518.3	.249	40.8	23.	7.7
1	P-1	3	3	6	1574.	1500.	1.113	2.4	1.	.7	521.3	.306	23.2	13.	5.1
1	P-1	3	3	7	1593.	1500.	1.970	3.6	2.	1.9	526.4	.545	37.4	21.	11.3
2	P-2A	10	2	1	1486.	1500.	1.056	4.2	3.	1.5	626.4	.368	40.0	22.	7.5
2	P-2A	10	2	2	1500.	1500.	1.043	3.2	2.	2.3	541.1	.727	34.2	19.	10.4
2	P-2A	10	2	3	1548.	1500.	2.864	7.8	4.	8.9	516.5	1.153	84.3	48.	35.4
2	P-2A	10	2	4	1583.	1500.	1.476	2.5	1.	10.6	525.8	4.197	29.6	17.	41.0
2	P-2A	10	2	5	1598.	1500.	1.837	4.0	2.	8.3	529.9	2.064	44.6	26.	31.3
2	P-2A	10	2	6	1609.	1500.	1.109	2.3	1.	6.1	532.8	2.640	25.0	14.	22.1
2	P-2A	10	2	7	1629.	1500.	1.936	3.9	2.	12.5	538.0	3.242	41.4	24.	43.3
3	P-4	9	8	1	1556.	1400.	1.056	4.3	2.	.1	516.6	.015	43.0	24.	2.4
3	P-4	9	8	2	1567.	1400.	1.043	4.0	2.	.1	539.7	.030	39.2	22.	3.2
3	P-4	9	8	3	1606.	1400.	2.864	8.0	4.	1.7	529.9	.219	84.4	48.	17.3
3	P-4	9	8	4	1638.	1400.	1.476	3.2	2.	1.6	538.5	.507	35.4	20.	12.8
3	P-4	9	8	5	1651.	1400.	1.837	5.0	3.	1.4	542.1	.268	48.8	28.	11.6
3	P-4	9	8	6	1662.	1400.	1.109	2.9	2.	1.0	544.8	.331	28.4	16.	7.7
3	P-4	9	8	7	1679.	1400.	1.936	4.0	2.	2.5	549.4	.613	44.3	26.	17.0
4	P-3	3	8	1	1550.	1400.	1.116	1.7	1.	.0	513.7	.012	13.2	7.	.4
4	P-3	3	8	2	1561.	1400.	1.088	1.6	1.	.0	516.5	.020	12.3	7.	.6
4	P-3	3	8	3	1594.	1400.	4.886	5.3	3.	.9	525.3	.175	41.4	23.	7.2
4	P-3	3	8	4	1625.	1400.	1.992	1.7	1.	.7	533.6	.419	14.0	8.	4.6
4	P-3	3	8	5	1638.	1400.	2.774	2.9	2.	.7	537.1	.229	21.8	12.	4.5
4	P-3	3	8	6	1649.	1400.	1.228	1.3	1.	.3	539.9	.264	9.1	5.	2.2
4	P-3	3	8	7	1665.	1400.	2.950	2.5	1.	1.2	544.1	.489	19.4	11.	7.0
5	P-5	6	5	1	1473.	1500.	1.120	2.7	2.	.1	678.3	.025	21.6	12.	.8
5	P-5	6	5	2	1486.	1500.	1.090	2.6	1.	.1	521.5	.055	19.6	11.	1.2
5	P-5	6	5	3	1532.	1500.	4.962	7.6	4.	2.5	509.5	.334	67.2	38.	14.1
5	P-5	6	5	4	1572.	1500.	2.012	1.7	1.	2.8	520.2	1.607	21.1	12.	10.0
5	P-5	6	5	5	1587.	1500.	2.778	3.8	2.	2.0	524.1	.521	34.7	20.	8.8
5	P-5	6	5	6	1598.	1500.	1.232	1.6	1.	1.0	527.2	.649	14.6	8.	4.4
5	P-5	6	5	7	1618.	1500.	2.990	3.2	2.	3.4	532.4	1.050	31.1	18.	13.8
6	I-70	2	9	1	1572.	1500.	1.118	.0	0.	-1.0	.0	.000	.0	0.	-8.9
6	I-70	2	9	2	1583.	1500.	1.090	.0	0.	-1.0	.0	.000	.0	0.	-8.0
6	I-70	2	9	3	1610.	1500.	4.902	.0	0.	-4.3	.0	.000	.0	0.	-37.2
6	I-70	2	9	4	1643.	1500.	2.996	.0	0.	-3.5	.0	.000	.0	0.	-22.6
6	I-70	2	9	5	1656.	1500.	2.752	.0	0.	-2.6	.0	.000	.0	0.	-19.2
6	I-70	2	9	6	1667.	1500.	1.228	.0	0.	-1.2	.0	.000	.0	0.	-8.5
6	I-70	2	9	7	1682.	1500.	2.958	.0	0.	-2.9	.0	.000	.0	0.	-20.3
7	I-71	6	1	1	1446.	1500.	1.132	.0	0.	-2.2	.0	.000	.0	0.	-19.8
7	I-71	6	1	2	1459.	1500.	1.100	.0	0.	-1.9	.0	.000	.0	0.	-21.4
7	I-71	6	1	3	1488.	1500.	5.390	.0	0.	-6.5	.0	.000	.0	0.	-51.6
7	I-71	6	1	4	1531.	1500.	2.122	.0	0.	-3.6	.0	.000	.0	0.	-30.4
7	I-71	6	1	5	1547.	1500.	2.970	.0	0.	-5.6	.0	.000	.0	0.	-33.2
7	I-71	6	1	6	1563.	1500.	1.256	.0	0.	-2.1	.0	.000	.0	0.	-17.4
7	I-71	6	1	7	1580.	1500.	3.204	.0	0.	-6.2	.0	.000	.0	0.	-37.3
8	I-72	11	1	1	1548.	1500.	1.142	.0	0.	-2.1	.0	.000	.0	0.	-19.6
8	I-72	11	1	2	1560.	1500.	1.108	.0	0.	-2.0	.0	.000	.0	0.	-20.3
8	I-72	11	1	3	1581.	1500.	5.752	.0	0.	-10.4	.0	.000	.0	0.	-68.9
8	I-72	11	1	4	1620.	1500.	2.214	.0	0.	-4.0	.0	.000	.0	0.	-34.3
8	I-72	11	1	5	1634.	1500.	3.132	.0	0.	-5.7	.0	.000	.0	0.	-39.8
8	I-72	11	1	6	1650.	1500.	1.278	.0	0.	-2.3	.0	.000	.0	0.	-19.2
8	I-72	11	1	7	1664.	1500.	3.384	.0	0.	-6.1	.0	.000	.0	0.	-42.9
9	I-75	2	5	1	1530.	1500.	1.118	.0	0.	-2.2	.0	.000	.0	0.	-22.1
9	I-75	2	5	2	1540.	1500.	1.090	.0	0.	-2.5	.0	.000	.0	0.	-24.1
9	I-75	2	5	3	1568.	1500.	4.902	.0	0.	-10.3	.0	.000	.0	0.	-98.4
9	I-75	2	5	4	1604.	1500.	1.996	.0	0.	-8.4	.0	.000	.0	0.	-51.7
9	I-75	2	5	5	1618.	1500.	2.752	.0	0.	-7.3	.0	.000	.0	0.	-55.2

9	I-75	2	5	6	1631.	1500.	1.224	.0	0.	-5.0	.0	.000	.0	0.	-29.1
9	I-75	2	5	7	1646.	1500.	2.958	.0	0.	-10.0	.0	.000	.0	0.	-62.8
10	I-76	1	2	1	1498.	1500.	1.124	.0	0.	-1.9	.0	.000	.0	0.	-24.0
10	I-76	1	2	2	1509.	1500.	1.096	.0	0.	-3.7	.0	.000	.0	0.	-38.4
10	I-76	1	2	3	1541.	1500.	5.156	.0	0.	-9.9	.0	.000	.0	0.	-103.7
10	I-76	1	2	4	1582.	1500.	2.062	.0	0.	-12.9	.0	.000	.0	0.	-69.8
10	I-76	1	2	5	1597.	1500.	2.864	.0	0.	-7.6	.0	.000	.0	0.	-60.1
10	I-76	1	2	6	1610.	1500.	1.244	.0	0.	-6.8	.0	.000	.0	0.	-37.9
10	I-76	1	2	7	1627.	1500.	3.086	.0	0.	-11.2	.0	.000	.0	0.	-71.3
11	I-104	11	5	1	1558.	1500.	1.124	.0	0.	-6.4	.0	.000	.0	0.	-56.5
11	I-104	11	5	2	1570.	1500.	1.096	.0	0.	-6.7	.0	.000	.0	0.	-80.3
11	I-104	11	5	3	1600.	1500.	5.156	.0	0.	-22.1	.0	.000	.0	0.	-163.7
11	I-104	11	5	4	1639.	1500.	2.062	.0	0.	-12.7	.0	.000	.0	0.	-102.8
11	I-104	11	5	5	1653.	1500.	2.864	.0	0.	-15.1	.0	.000	.0	0.	-97.7
11	I-104	11	5	6	1667.	1500.	1.244	.0	0.	-7.6	.0	.000	.0	0.	-59.1
11	I-104	11	5	7	1683.	1500.	3.086	.0	0.	-18.6	.0	.000	.0	0.	-111.7
12	I-204	11	1	1	1549.	1500.	1.128	.0	0.	-4.5	.0	.000	.0	0.	-42.4
12	I-204	11	1	2	1562.	1500.	1.098	.0	0.	-4.4	.0	.000	.0	0.	-44.1
12	I-204	11	1	3	1582.	1500.	5.236	.0	0.	-20.9	.0	.000	.0	0.	-137.8
12	I-204	11	1	4	1622.	1500.	2.086	.0	0.	-8.3	.0	.000	.0	0.	-71.0
12	I-204	11	1	5	1635.	1500.	2.910	.0	0.	-11.6	.0	.000	.0	0.	-81.2
12	I-204	11	1	6	1651.	1500.	1.250	.0	0.	-5.0	.0	.000	.0	0.	-41.1
12	I-204	11	1	7	1665.	1500.	3.136	.0	0.	-12.5	.0	.000	.0	0.	-87.3
13	I-317	6	1	1	1448.	1500.	1.132	.0	0.	-6.4	.0	.000	.0	0.	-57.8
13	I-317	6	1	2	1461.	1500.	1.100	.0	0.	-5.4	.0	.000	.0	0.	-62.5
13	I-317	6	1	3	1490.	1500.	5.390	.0	0.	-19.1	.0	.000	.0	0.	-150.6
13	I-317	6	1	4	1533.	1500.	2.112	.0	0.	-10.4	.0	.000	.0	0.	-88.2
13	I-317	6	1	5	1549.	1500.	2.970	.0	0.	-16.3	.0	.000	.0	0.	-96.8
13	I-317	6	1	6	1565.	1500.	1.236	.0	0.	-6.1	.0	.000	.0	0.	-49.9
13	I-317	6	1	7	1581.	1500.	3.204	.0	0.	-18.2	.0	.000	.0	0.	-108.8
14	P-6	9	5	1	1508.	1500.	1.114	4.3	3.	.2	626.2	.038	27.9	15.	1.2
14	P-6	9	5	2	1521.	1500.	1.086	3.8	2.	.3	533.1	.085	24.2	13.	2.0
14	P-6	9	5	3	1565.	1500.	4.770	11.3	6.	4.8	519.2	.426	77.2	44.	21.5
14	P-6	9	5	4	1601.	1500.	1.964	2.8	1.	4.5	528.9	1.583	21.7	12.	17.3
14	P-6	9	5	5	1616.	1500.	2.692	5.5	3.	3.7	532.9	.674	38.9	22.	14.6
14	P-6	9	5	6	1627.	1500.	1.220	2.3	1.	2.0	535.8	.862	16.4	9.	7.6
14	P-6	9	5	7	1646.	1500.	2.892	4.6	2.	6.3	540.9	1.364	33.9	19.	22.9
15	P-7	5	8	1	1542.	1500.	1.112	3.8	2.	.1	512.6	.014	20.8	11.	.5
15	P-7	5	8	2	1553.	1500.	1.086	3.6	2.	.1	515.7	.027	19.3	11.	.8
15	P-7	5	8	3	1590.	1500.	4.748	11.3	6.	2.2	525.5	.195	60.1	34.	11.7
15	P-7	5	8	4	1622.	1500.	1.958	3.7	2.	1.7	534.0	.458	19.9	11.	8.0
15	P-7	5	8	5	1636.	1500.	2.682	6.2	3.	1.6	537.6	.252	32.2	18.	7.4
15	P-7	5	8	6	1646.	1500.	1.220	2.7	1.	.8	540.3	.310	14.0	8.	3.8
15	P-7	5	8	7	1663.	1500.	2.880	5.2	3.	2.9	544.8	.564	28.0	16.	12.4
16	P-8	4	5	1	1486.	1500.	1.114	3.0	2.	.0	689.3	.016	15.8	9.	.4
16	P-8	4	5	2	1498.	1500.	1.086	3.0	2.	.1	523.4	.027	14.7	8.	.6
16	P-8	4	5	3	1537.	1500.	4.770	9.0	5.	1.9	511.0	.208	47.1	26.	8.2
16	P-8	4	5	4	1572.	1500.	1.964	2.7	1.	1.7	520.3	.623	15.6	9.	6.1
16	P-8	4	5	5	1586.	1500.	2.692	4.9	3.	1.4	524.2	.295	25.5	14.	5.4
16	P-8	4	5	6	1598.	1500.	1.220	2.1	1.	.8	527.2	.360	11.1	6.	2.8
16	P-8	4	5	7	1616.	1500.	2.892	4.1	2.	2.6	532.0	.628	22.9	13.	9.0
17	I-9	6	7	1	1562.	1500.	1.120	.0	0.	-3.2	.0	.000	.0	0.	-24.8
17	I-9	6	7	2	1572.	1500.	1.090	.0	0.	-5.2	.0	.000	.0	0.	-31.9
17	I-9	6	7	3	1603.	1500.	4.962	.0	0.	-14.9	.0	.000	.0	0.	-104.7
17	I-9	6	7	4	1640.	1500.	2.012	.0	0.	-19.5	.0	.000	.0	0.	-72.8
17	I-9	6	7	5	1655.	1500.	2.778	.0	0.	-12.2	.0	.000	.0	0.	-64.9
17	I-9	6	7	6	1668.	1500.	1.228	.0	0.	-10.0	.0	.000	.0	0.	-38.8
17	I-9	6	7	7	1683.	1500.	2.990	.0	0.	-16.9	.0	.000	.0	0.	-74.8
18	I-10	8	4	1	1516.	1500.	1.114	.0	0.	-4.8	.0	.000	.0	0.	-28.0
18	I-10	8	4	2	1526.	1500.	1.086	.0	0.	-5.7	.0	.000	.0	0.	-29.9
18	I-10	8	4	3	1554.	1500.	4.770	.0	0.	-20.7	.0	.000	.0	0.	-119.0
18	I-10	8	4	4	1593.	1500.	1.964	.0	0.	-12.2	.0	.000	.0	0.	-56.5
18	I-10	8	4	5	1609.	1500.	2.692	.0	0.	-12.7	.0	.000	.0	0.	-67.6
18	I-10	8	4	6	1623.	1500.	1.220	.0	0.	-9.1	.0	.000	.0	0.	-36.4
18	I-10	8	4	7	1640.	1500.	2.892	.0	0.	-16.5	.0	.000	.0	0.	-75.4
19	I-11	5	4	1	1474.	1500.	1.112	.0	0.	-5.9	.0	.000	.0	0.	-28.6
19	I-11	5	4	2	1497.	1500.	1.084	.0	0.	-5.3	.0	.000	.0	0.	-28.7
19	I-11	5	4	3	1525.	1500.	4.710	.0	0.	-21.4	.0	.000	.0	0.	-120.4
19	I-11	5	4	4	1564.	1500.	1.948	.0	0.	-11.4	.0	.000	.0	0.	-54.4
19	I-11	5	4	5	1580.	1500.	2.666	.0	0.	-13.3	.0	.000	.0	0.	-69.2
19	I-11	5	4	6	1594.	1500.	1.218	.0	0.	-8.2	.0	.000	.0	0.	-35.5
19	I-11	5	4	7	1611.	1500.	2.862	.0	0.	-16.3	.0	.000	.0	0.	-76.0
20	I-12R	8	7	1	1573.	1500.	1.116	.0	0.	-3.7	.0	.000	.0	0.	-26.4
20	I-12R	8	7	2	1583.	1500.	1.088	.0	0.	-5.3	.0	.000	.0	0.	-30.9
20	I-12R	8	7	3	1613.	1500.	4.852	.0	0.	-16.8	.0	.000	.0	0.	-111.5
20	I-12R	8	7	4	1650.	1500.	1.984	.0	0.	-17.8	.0	.000	.0	0.	-66.2
20	I-12R	8	7	5	1665.	1500.	2.728	.0	0.	-12.2	.0	.000	.0	0.	-66.1
20	I-12R	8	7	6	1678.	1500.	1.226	.0	0.	-9.7	.0	.000	.0	0.	-37.4
20	I-12R	8	7	7	1693.	1500.	2.934	.0	0.	-16.4	.0	.000	.0	0.	-74.3
21	P-13	6	3	1	851.	1500.	1.059	45.7	36.	16.6	793.3	.363	200.9	117.	44.4
21	P-13	6	3	2	905.	1500.	1.044	38.8	24.	23.5	620.4	.604	171.4	91.	64.9
21	P-13	6	3	3	1180.	1500.	3.929	145.7	95.	92.2	654.1	.633	652.9	363.	267.2
21	P-13	6	3	4	1198.	1500.	1.493	34.4	20.	65.6	573.0	1.905	164.7	90.	187.3

21	P-13	6	3	5	1230.	1500.	1.866	58.2	34.	54.9	585.9	.944	280.7	154.	155.0
21	P-13	6	3	6	1210.	1500.	1.113	29.6	16.	42.0	555.8	1.417	146.3	80.	110.7
21	P-13	6	3	7	1284.	1500.	1.968	48.2	26.	82.8	548.6	1.718	244.5	134.	229.1
22	I-329	4	1	1	1469.	1500.	1.124	.0	0.	-3.3	.0	.000	.0	0.	-7.6
22	I-329	4	1	2	1481.	1500.	1.096	.0	0.	-3.3	.0	.000	.0	0.	-7.7
22	I-329	4	1	3	1512.	1500.	5.156	.0	0.	-12.1	.0	.000	.0	0.	-35.3
22	I-329	4	1	4	1551.	1500.	2.062	.0	0.	-6.8	.0	.000	.0	0.	-15.4
22	I-329	4	1	5	1566.	1500.	2.864	.0	0.	-7.4	.0	.000	.0	0.	-20.1
22	I-329	4	1	6	1581.	1500.	1.244	.0	0.	-4.4	.0	.000	.0	0.	-9.7
22	I-329	4	1	7	1597.	1500.	3.086	.0	0.	-9.0	.0	.000	.0	0.	-22.2
23	I-330	9	1	1	1519.	1500.	1.124	.0	0.	-2.1	.0	.000	.0	0.	-6.8
23	I-330	9	1	2	1529.	1500.	1.096	.0	0.	-2.6	.0	.000	.0	0.	-7.0
23	I-330	9	1	3	1557.	1500.	5.156	.0	0.	-10.1	.0	.000	.0	0.	-30.9
23	I-330	9	1	4	1597.	1500.	2.062	.0	0.	-9.1	.0	.000	.0	0.	-19.4
23	I-330	9	1	5	1613.	1500.	2.864	.0	0.	-7.3	.0	.000	.0	0.	-19.3
23	I-330	9	1	6	1627.	1500.	1.244	.0	0.	-4.9	.0	.000	.0	0.	-10.5
23	I-330	9	1	7	1643.	1500.	3.086	.0	0.	-10.2	.0	.000	.0	0.	-24.2
24	I-14	4	7	1	1565.	1500.	1.114	.0	0.	-3.7	.0	.000	.0	0.	-9.0
24	I-14	4	7	2	1574.	1500.	1.086	.0	0.	-3.6	.0	.000	.0	0.	-8.2
24	I-14	4	7	3	1599.	1500.	4.790	.0	0.	-16.9	.0	.000	.0	0.	-38.0
24	I-14	4	7	4	1633.	1500.	1.968	.0	0.	-7.2	.0	.000	.0	0.	-14.8
24	I-14	4	7	5	1647.	1500.	2.700	.0	0.	-9.5	.0	.000	.0	0.	-21.2
24	I-14	4	7	6	1659.	1500.	1.222	.0	0.	-4.5	.0	.000	.0	0.	-9.4
24	I-14	4	7	7	1674.	1500.	2.902	.0	0.	-10.7	.0	.000	.0	0.	-22.5
25	P-15	4	2	1	1434.	1500.	1.112	5.2	4.	.4	776.1	.067	9.3	6.	.4
25	P-15	4	2	2	1447.	1500.	1.086	4.7	3.	.6	569.7	.126	8.6	4.	.6
25	P-15	4	2	3	1488.	1500.	4.728	16.8	10.	4.3	579.2	.256	29.4	15.	6.1
25	P-15	4	2	4	1526.	1500.	1.952	4.4	2.	4.3	510.0	.985	8.6	5.	5.6
25	P-15	4	2	5	1542.	1500.	2.674	8.8	5.	3.5	514.2	.400	15.9	8.	4.7
25	P-15	4	2	6	1554.	1500.	1.218	3.4	2.	2.1	517.4	.616	6.6	4.	2.7
25	P-15	4	2	7	1574.	1500.	2.872	7.3	4.	5.8	522.6	.798	13.7	7.	7.9
26	P-16	8	2	1	1446.	1500.	1.114	4.3	3.	.1	721.4	.016	4.5	3.	.1
26	P-16	8	2	2	1458.	1500.	1.086	4.3	2.	.1	538.0	.028	4.4	2.	.1
26	P-16	8	2	3	1502.	1500.	4.770	12.4	7.	2.8	551.8	.225	13.4	7.	2.7
26	P-16	8	2	4	1542.	1500.	1.964	3.2	2.	2.9	513.2	.915	3.7	2.	2.7
26	P-16	8	2	5	1558.	1500.	2.692	6.5	3.	2.3	517.4	.356	7.2	4.	2.2
26	P-16	8	2	6	1570.	1500.	1.220	2.7	1.	1.2	520.6	.458	3.1	2.	1.1
26	P-16	8	2	7	1591.	1500.	2.892	5.2	3.	4.2	526.1	.822	5.8	3.	3.9
27	P-17	3	4	1	1503.	1500.	1.116	.0	0.	-2.2	.0	.000	1.3	1.	-1.6
27	P-17	3	4	2	1514.	1500.	1.088	.0	0.	-1.6	.0	.000	1.2	1.	-1.4
27	P-17	3	4	3	1543.	1500.	4.846	.0	0.	-6.5	.0	.000	4.0	2.	-4.8
27	P-17	3	4	4	1580.	1500.	1.982	.0	0.	-2.4	.0	.000	1.2	1.	-1.4
27	P-17	3	4	5	1594.	1500.	2.726	.0	0.	-3.7	.0	.000	2.1	1.	-2.6
27	P-17	3	4	6	1607.	1500.	1.226	.0	0.	-1.6	.0	.000	.9	1.	-1.1
27	P-17	3	4	7	1623.	1500.	2.930	.0	0.	-3.7	.0	.000	1.9	1.	-2.2
28	P-18	10	6	1	1531.	1500.	1.114	4.1	2.	.1	510.1	.021	4.5	2.	.1
28	P-18	10	6	2	1543.	1500.	1.088	3.8	2.	.1	513.3	.038	4.2	2.	.1
28	P-18	10	6	3	1584.	1500.	4.808	12.2	6.	2.8	524.2	.228	13.2	7.	2.9
28	P-18	10	6	4	1619.	1500.	1.972	3.2	2.	2.8	533.3	.865	3.5	2.	2.8
28	P-18	10	6	5	1634.	1500.	2.708	6.0	3.	2.5	537.2	.410	6.6	4.	2.4
28	P-18	10	6	6	1645.	1500.	1.222	2.4	1.	1.3	540.1	.559	2.7	1.	1.3
28	P-18	10	6	7	1663.	1500.	2.912	4.8	3.	4.4	545.1	.903	5.4	3.	4.3
TOTALS								752.1	443.3	-366.2			3861.0	2153.1	-3478.2

********** END OF WELL REPORT **********

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*                                                                                *
*          WATERFLOOD DISPLACEMENT FOR E.N. WOODS LEASE                          *
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*          SUMMARY REPORT: BOAST II (RELEASE 1.1)               *
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ELAPSED TIME (DAYS)          =  9855.00   TIME STEP NUMBER              = 1974      TIME STEP SIZE (DAYS)          =     5.00

CURRENT AVG RES PRESSURE     =   1587.1   PREVIOUS AVG RES PRESSURE     =   1587.5  PRESSURE DPMAX(  6,  3,  1)   =      -.9
OIL DSMAX(  6,  1,  7)       =  -.00056   GAS DSMAX(  5,  2,  1)        =   .00032  WATER DSMAX(  6,  1,  7)      =   .00055
OIL MATERIAL BALANCE (%)     = -.006723   GAS MATERIAL BALANCE (%)      = -.005889  WATER MATERIAL BALANCE (%)    = -.000116
CUM. OIL MATERIAL BALANCE(%)=-3.162623   CUM. GAS MATERIAL BALANCE(%) =-2.881183  CUM. WATER MATERIAL BALANCE(%)= -.000946

OIL PRODUCTION RATE (STB/D) =    752.1   CUM. OIL PRODUCTION (STB)    = .3861E+07
GAS PRODUCTION RATE (MSCF/D)=    443.3   CUM. GAS PRODUCTION (MSCF)   = .2153E+07
WATER PRODUCTION RATE(STB/D)=    546.6
                                         CUM. WATER PRODUCTION (STB)  = .1671E+07

GAS INJECTION RATE (MSCF/D) =       .0   CUM. GAS INJECTION (MSCF)    = .0000E+00
WATER INJECTION RATE (STB/D)=   -912.8   CUM. WATER INJECTION (STB)   =-.5149E+07

PRODUCING WOR (STB/STB)      =     .727   CUM. WOR (STB/STB)           =     .433
PRODUCING GOR (SCF/STB)      =    589.4   CUM. GOR (SCF/STB)           =    557.7


AQUIFER MODEL FOR ROCK REGION   1:
AQUIFER INFLUX RATE (STB/D) =       .0   CUM. AQUIFER INFLUX (STB)    = .0000E+00
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1

***** RESERVOIR PRESSURE DISTRIBUTION *****

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	1504.	1500.	1486.	1468.	1446.	1445.	1451.	1467.	1513.	1520.	1547.
2	1495.	1492.	1477.	1447.	1439.	1420.	1437.	1455.	1503.	1501.	1524.
3	1496.	1491.	1464.	1457.	1386.	1038.	1340.	1454.	1508.	1528.	1533.
4	1510.	1508.	1503.	1486.	1473.	1424.	1461.	1504.	1524.	1541.	1544.
5	1525.	1524.	1515.	1492.	1495.	1479.	1502.	1520.	1517.	1547.	1554.
6	1537.	1536.	1533.	1528.	1527.	1529.	1535.	1543.	1548.	1539.	1552.
7	1550.	1549.	1548.	1555.	1546.	1556.	1558.	1565.	1565.	1568.	1569.
8	1562.	1560.	1553.	1558.	1549.	1563.	1568.	1572.	1564.	1578.	1579.
9	1570.	1570.	1569.	1568.	1569.	1572.	1574.	1579.	1582.	1585.	1585.
10	1571.	1570.	1571.	1570.	1571.	1574.	1575.	1580.	1585.	1586.	1587.

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	1515.	1510.	1497.	1479.	1457.	1458.	1462.	1479.	1524.	1533.	1559.
2	1506.	1502.	1488.	1459.	1450.	1435.	1449.	1467.	1514.	1515.	1537.
3	1506.	1502.	1476.	1468.	1404.	1091.	1366.	1467.	1518.	1539.	1543.
4	1520.	1518.	1513.	1496.	1484.	1441.	1476.	1514.	1534.	1551.	1555.
5	1535.	1534.	1525.	1504.	1506.	1491.	1513.	1530.	1530.	1558.	1567.
6	1547.	1547.	1543.	1539.	1538.	1540.	1546.	1554.	1559.	1551.	1563.
7	1560.	1559.	1558.	1564.	1556.	1566.	1569.	1576.	1576.	1579.	1580.
8	1572.	1571.	1564.	1568.	1560.	1574.	1578.	1583.	1575.	1588.	1590.
9	1580.	1580.	1580.	1579.	1579.	1582.	1584.	1589.	1593.	1595.	1596.
10	1581.	1581.	1581.	1580.	1582.	1584.	1585.	1590.	1595.	1597.	1597.

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	1547.	1542.	1528.	1504.	1489.	1487.	1496.	1516.	1552.	1569.	1580.
2	1537.	1533.	1521.	1500.	1483.	1476.	1488.	1511.	1547.	1563.	1573.
3	1536.	1533.	1519.	1501.	1458.	1367.	1448.	1504.	1549.	1569.	1573.
4	1548.	1546.	1539.	1526.	1511.	1490.	1515.	1542.	1563.	1580.	1584.
5	1563.	1562.	1555.	1542.	1538.	1537.	1548.	1562.	1574.	1591.	1597.
6	1575.	1574.	1571.	1568.	1567.	1571.	1576.	1583.	1590.	1592.	1597.
7	1587.	1587.	1586.	1588.	1585.	1596.	1598.	1605.	1606.	1608.	1609.
8	1600.	1599.	1596.	1597.	1597.	1604.	1606.	1612.	1614.	1617.	1618.
9	1607.	1608.	1608.	1606.	1608.	1610.	1612.	1617.	1622.	1623.	1623.
10	1608.	1608.	1609.	1608.	1610.	1611.	1613.	1618.	1623.	1624.	1624.

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	1588.	1583.	1568.	1544.	1530.	1530.	1537.	1559.	1592.	1603.	1619.

2	1578.	1574.	1561.	1539.	1524.	1516.	1529.	1551.	1587.	1598.	1607.
3	1575.	1571.	1555.	1540.	1498.	1385.	1488.	1548.	1587.	1606.	1610.
4	1585.	1584.	1576.	1563.	1551.	1533.	1557.	1581.	1601.	1618.	1621.
5	1598.	1598.	1592.	1578.	1575.	1577.	1588.	1601.	1610.	1628.	1635.
6	1609.	1608.	1606.	1604.	1604.	1612.	1616.	1624.	1628.	1627.	1632.
7	1620.	1620.	1619.	1624.	1622.	1634.	1637.	1643.	1642.	1643.	1643.
8	1632.	1632.	1628.	1630.	1629.	1637.	1640.	1646.	1646.	1650.	1650.
9	1640.	1640.	1641.	1639.	1640.	1643.	1644.	1649.	1654.	1655.	1655.
10	1641.	1641.	1641.	1640.	1642.	1644.	1645.	1650.	1655.	1656.	1656.

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	1603.	1598.	1583.	1559.	1546.	1546.	1554.	1574.	1607.	1619.	1632.
2	1593.	1589.	1575.	1555.	1540.	1535.	1546.	1567.	1602.	1614.	1623.
3	1590.	1586.	1570.	1556.	1516.	1417.	1507.	1564.	1603.	1621.	1624.
4	1599.	1598.	1590.	1578.	1567.	1550.	1573.	1597.	1616.	1633.	1637.
5	1613.	1613.	1606.	1592.	1590.	1592.	1603.	1616.	1625.	1643.	1649.
6	1622.	1622.	1620.	1618.	1618.	1626.	1630.	1638.	1642.	1642.	1647.
7	1633.	1633.	1632.	1637.	1636.	1649.	1651.	1657.	1656.	1657.	1657.
8	1645.	1645.	1641.	1643.	1643.	1651.	1654.	1659.	1660.	1663.	1663.
9	1653.	1653.	1653.	1651.	1653.	1656.	1657.	1662.	1667.	1668.	1668.
10	1653.	1653.	1654.	1652.	1654.	1656.	1658.	1663.	1668.	1669.	1669.

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	1616.	1611.	1596.	1574.	1560.	1562.	1568.	1588.	1622.	1632.	1649.
2	1607.	1602.	1588.	1567.	1554.	1548.	1560.	1579.	1615.	1625.	1636.
3	1603.	1599.	1581.	1569.	1531.	1397.	1521.	1579.	1615.	1634.	1637.
4	1612.	1611.	1603.	1590.	1581.	1565.	1588.	1612.	1628.	1645.	1650.
5	1625.	1625.	1619.	1604.	1603.	1604.	1616.	1629.	1636.	1656.	1663.
6	1634.	1633.	1631.	1630.	1631.	1639.	1643.	1651.	1654.	1653.	1659.
7	1644.	1644.	1644.	1650.	1648.	1662.	1663.	1670.	1668.	1668.	1669.
8	1656.	1656.	1652.	1654.	1653.	1662.	1665.	1671.	1670.	1674.	1675.
9	1664.	1664.	1664.	1662.	1664.	1667.	1668.	1673.	1678.	1679.	1679.
10	1664.	1664.	1665.	1663.	1665.	1667.	1669.	1674.	1679.	1680.	1680.

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	1633.	1628.	1613.	1590.	1578.	1578.	1586.	1607.	1638.	1649.	1662.
2	1623.	1619.	1606.	1586.	1573.	1568.	1579.	1600.	1633.	1645.	1654.
3	1620.	1616.	1601.	1587.	1554.	1471.	1549.	1598.	1633.	1651.	1654.
4	1628.	1627.	1619.	1607.	1598.	1586.	1607.	1628.	1646.	1662.	1666.
5	1641.	1641.	1635.	1622.	1620.	1623.	1634.	1646.	1655.	1673.	1679.
6	1649.	1649.	1647.	1646.	1647.	1655.	1660.	1667.	1671.	1671.	1677.
7	1659.	1659.	1659.	1664.	1664.	1677.	1679.	1685.	1684.	1685.	1685.
8	1671.	1671.	1668.	1669.	1670.	1678.	1681.	1687.	1688.	1690.	1690.
9	1678.	1679.	1679.	1677.	1679.	1682.	1683.	1688.	1693.	1694.	1694.
10	1679.	1679.	1680.	1678.	1680.	1682.	1684.	1688.	1694.	1694.	1694.

********* OIL SATURATION *********

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	.693	.769	.770	.514	.682	.003	.676	.729	.534	.474	.001
2	.466	.736	.765	.738	.747	.550	.745	.771	.759	.659	.484
3	.755	.768	.769	.761	.697	.653	.706	.727	.776	.786	.781
4	.780	.763	.724	.767	.564	.680	.664	.554	.785	.786	.696
5	.781	.575	.753	.774	.773	.768	.777	.779	.764	.669	.164
6	.793	.789	.791	.776	.786	.724	.785	.751	.793	.785	.722
7	.799	.798	.794	.634	.773	.490	.757	.525	.783	.804	.803
8	.803	.797	.798	.801	.794	.792	.806	.797	.796	.808	.810
9	.805	.681	.799	.806	.805	.807	.808	.810	.810	.812	.812
10	.807	.806	.807	.807	.807	.808	.809	.811	.812	.813	.814

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	.634	.765	.778	.440	.661	.002	.651	.705	.453	.438	.000
2	.307	.706	.776	.720	.757	.531	.740	.775	.754	.612	.444
3	.742	.779	.777	.776	.662	.624	.666	.697	.783	.783	.773
4	.784	.755	.704	.782	.505	.635	.614	.481	.783	.780	.659

5	.777	.502	.731	.777	.784	.759	.781	.777	.742	.619	.021
6	.792	.787	.790	.768	.783	.677	.779	.718	.789	.774	.689
7	.798	.798	.792	.582	.758	.358	.729	.420	.766	.802	.801
8	.801	.793	.789	.799	.781	.785	.805	.789	.776	.806	.808
9	.804	.640	.794	.805	.803	.806	.808	.809	.806	.811	.811
10	.807	.806	.806	.806	.806	.808	.809	.810	.810	.812	.812

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	.507	.617	.650	.579	.622	.238	.621	.638	.536	.444	.000
2	.436	.633	.690	.681	.679	.537	.677	.689	.679	.593	.433
3	.658	.697	.704	.698	.649	.621	.648	.658	.707	.707	.670
4	.716	.676	.693	.708	.594	.631	.607	.583	.713	.683	.575
5	.712	.543	.661	.704	.715	.673	.703	.702	.671	.567	.268
6	.730	.721	.729	.710	.713	.624	.707	.661	.721	.716	.620
7	.736	.736	.740	.660	.708	.483	.684	.525	.710	.730	.726
8	.734	.722	.731	.747	.726	.731	.754	.731	.725	.742	.744
9	.737	.644	.713	.739	.735	.742	.757	.747	.737	.747	.747
10	.744	.749	.737	.748	.740	.745	.758	.748	.739	.748	.748

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	.282	.467	.526	.444	.526	.014	.516	.495	.328	.221	.000
2	.119	.493	.590	.599	.618	.434	.609	.607	.564	.464	.202
3	.531	.610	.646	.658	.566	.530	.551	.570	.652	.630	.557
4	.668	.567	.610	.664	.488	.519	.499	.451	.651	.567	.417
5	.641	.363	.552	.644	.668	.560	.633	.613	.571	.401	.019
6	.695	.674	.692	.649	.633	.433	.604	.505	.651	.633	.466
7	.703	.700	.705	.554	.598	.172	.554	.290	.599	.677	.662
8	.691	.651	.688	.721	.682	.659	.727	.656	.679	.708	.709
9	.677	.494	.629	.703	.696	.710	.734	.717	.697	.713	.716
10	.709	.710	.696	.720	.706	.715	.736	.718	.698	.715	.715

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	.456	.571	.615	.540	.602	.030	.597	.599	.475	.374	.000
2	.384	.596	.669	.670	.674	.503	.669	.680	.652	.548	.361
3	.620	.680	.703	.704	.626	.592	.622	.645	.708	.695	.637
4	.715	.653	.679	.711	.563	.602	.587	.550	.712	.658	.538
5	.692	.490	.632	.701	.719	.659	.703	.695	.652	.525	.215
6	.732	.714	.730	.706	.701	.577	.692	.627	.715	.694	.562
7	.738	.737	.741	.633	.676	.404	.647	.464	.683	.726	.711
8	.730	.710	.731	.752	.725	.708	.760	.709	.726	.745	.744
9	.727	.605	.693	.739	.734	.744	.763	.750	.736	.747	.749
10	.744	.747	.735	.751	.740	.746	.765	.751	.736	.748	.750

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	.419	.558	.607	.436	.545	.008	.546	.569	.369	.328	.004
2	.191	.549	.653	.643	.654	.458	.648	.666	.631	.522	.322
3	.583	.666	.695	.697	.583	.557	.582	.607	.698	.683	.619
4	.705	.630	.655	.704	.457	.560	.531	.424	.704	.644	.505
5	.660	.385	.604	.691	.714	.646	.695	.685	.634	.485	.005
6	.727	.702	.724	.692	.691	.535	.677	.592	.704	.674	.523
7	.734	.732	.734	.566	.647	.249	.603	.333	.656	.716	.697
8	.725	.703	.725	.746	.716	.683	.753	.686	.715	.738	.738
9	.718	.563	.684	.733	.727	.738	.757	.744	.729	.742	.743
10	.739	.740	.729	.746	.735	.742	.758	.745	.729	.742	.743

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	.385	.503	.542	.514	.550	.002	.539	.548	.421	.335	.000
2	.318	.548	.623	.630	.630	.456	.625	.629	.596	.499	.320
3	.564	.631	.662	.666	.584	.539	.568	.602	.657	.637	.575
4	.673	.603	.640	.672	.520	.567	.544	.504	.662	.602	.489
5	.642	.436	.581	.657	.682	.612	.657	.647	.595	.475	.166
6	.694	.670	.692	.664	.654	.533	.646	.582	.666	.638	.501
7	.701	.699	.708	.605	.633	.351	.599	.422	.638	.675	.654
8	.686	.666	.688	.721	.677	.658	.729	.658	.674	.703	.703
9	.685	.571	.643	.697	.688	.704	.735	.711	.689	.706	.708
10	.705	.713	.690	.716	.699	.709	.737	.713	.689	.707	.710

******** WATER SATURATION *********

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	.207	.120	.114	.379	.200	.995	.209	.156	.375	.457	.999
2	.459	.151	.113	.144	.120	.338	.131	.112	.127	.236	.447
3	.132	.112	.111	.110	.180	.229	.175	.156	.110	.111	.119
4	.110	.128	.164	.111	.331	.203	.227	.360	.111	.117	.219
5	.118	.345	.142	.112	.110	.118	.111	.114	.128	.249	.808
6	.110	.114	.110	.121	.112	.177	.115	.155	.111	.117	.194
7	.109	.110	.113	.282	.134	.452	.158	.416	.131	.110	.112
8	.110	.115	.110	.111	.112	.122	.109	.120	.112	.110	.110
9	.111	.245	.117	.110	.110	.110	.109	.110	.110	.110	.110
10	.110	.110	.110	.109	.110	.110	.109	.110	.110	.110	.110

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	.276	.133	.120	.459	.237	.998	.247	.194	.465	.498	1.000
2	.643	.192	.122	.175	.133	.365	.152	.121	.144	.286	.491
3	.156	.119	.121	.116	.230	.267	.227	.197	.115	.116	.130
4	.114	.143	.194	.115	.406	.259	.285	.447	.115	.127	.263
5	.126	.430	.168	.121	.114	.140	.117	.121	.156	.309	.978
6	.113	.120	.114	.132	.117	.229	.123	.193	.117	.129	.235
7	.113	.113	.118	.340	.154	.598	.192	.532	.151	.115	.117
8	.114	.121	.116	.115	.121	.132	.112	.130	.123	.114	.113
9	.115	.292	.125	.113	.114	.113	.112	.113	.115	.113	.113
10	.113	.114	.114	.113	.113	.113	.112	.113	.114	.113	.113

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	.425	.302	.259	.323	.282	.717	.287	.267	.391	.503	1.000
2	.504	.281	.213	.215	.214	.359	.218	.208	.236	.336	.517
3	.256	.211	.197	.197	.244	.273	.247	.238	.204	.216	.256
4	.197	.240	.216	.197	.315	.265	.293	.338	.205	.245	.363
5	.208	.394	.259	.206	.191	.233	.207	.216	.254	.376	.700
6	.193	.204	.194	.210	.206	.302	.215	.269	.208	.215	.322
7	.191	.193	.187	.270	.219	.467	.251	.424	.226	.207	.210
8	.200	.212	.201	.185	.207	.204	.180	.207	.214	.197	.195
9	.199	.299	.225	.197	.202	.194	.180	.192	.204	.195	.194
10	.193	.187	.200	.188	.196	.192	.179	.191	.203	.194	.193

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	.681	.479	.407	.481	.402	.985	.417	.436	.623	.754	.999
2	.855	.446	.334	.317	.294	.489	.302	.311	.371	.489	.769
3	.407	.318	.272	.251	.331	.368	.348	.342	.278	.311	.391
4	.262	.369	.317	.257	.446	.380	.426	.496	.284	.380	.545
5	.298	.598	.389	.283	.253	.368	.295	.324	.374	.562	.981
6	.241	.266	.245	.286	.304	.517	.337	.446	.294	.316	.499
7	.236	.241	.235	.392	.349	.804	.401	.683	.353	.275	.291
8	.255	.298	.257	.224	.264	.291	.219	.297	.273	.245	.243
9	.274	.467	.325	.246	.253	.239	.215	.235	.258	.240	.238
10	.238	.239	.253	.228	.243	.234	.212	.234	.255	.239	.237

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	.499	.372	.317	.385	.325	.948	.334	.329	.475	.592	1.000
2	.576	.342	.257	.248	.240	.419	.244	.240	.286	.405	.606
3	.318	.251	.218	.211	.271	.305	.276	.270	.225	.248	.311
4	.219	.284	.251	.214	.370	.296	.338	.395	.227	.291	.420
5	.249	.466	.309	.230	.208	.270	.230	.245	.294	.437	.766
6	.209	.229	.211	.233	.239	.371	.252	.324	.234	.257	.400
7	.206	.209	.203	.316	.272	.565	.307	.504	.271	.230	.245
8	.219	.241	.218	.197	.224	.244	.192	.247	.229	.212	.211
9	.227	.356	.262	.214	.219	.210	.190	.206	.222	.210	.209
10	.208	.206	.219	.201	.212	.206	.188	.205	.221	.210	.209

K = 6

	1	2	3	4	5	6	7	8	9	10	11

1	.542	.391	.331	.501	.392	.991	.396	.367	.590	.643	.996
2	.785	.397	.279	.281	.266	.471	.273	.259	.312	.435	.651
3	.361	.270	.232	.223	.315	.341	.316	.318	.241	.265	.334
4	.233	.313	.280	.226	.490	.342	.406	.535	.240	.310	.459
5	.287	.581	.343	.244	.218	.288	.243	.260	.317	.482	.995
6	.219	.246	.221	.252	.254	.420	.272	.365	.249	.282	.445
7	.215	.217	.214	.390	.308	.731	.358	.645	.304	.243	.263
8	.229	.253	.227	.206	.238	.275	.203	.276	.244	.223	.221
9	.240	.403	.275	.223	.230	.219	.200	.216	.233	.220	.218
10	.217	.216	.229	.210	.222	.215	.199	.215	.232	.219	.218

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	.581	.456	.408	.426	.392	.996	.406	.398	.541	.640	1.000
2	.652	.404	.318	.304	.302	.483	.307	.308	.357	.466	.656
3	.387	.314	.275	.265	.329	.360	.331	.332	.292	.321	.386
4	.275	.348	.304	.268	.427	.353	.399	.454	.292	.360	.480
5	.313	.531	.373	.288	.259	.333	.290	.307	.365	.497	.821
6	.259	.285	.261	.287	.299	.429	.312	.381	.295	.325	.472
7	.255	.258	.248	.356	.328	.627	.367	.556	.329	.292	.314
8	.274	.297	.273	.239	.284	.306	.233	.311	.292	.266	.264
9	.280	.398	.323	.267	.276	.260	.229	.255	.282	.261	.259
10	.258	.250	.274	.247	.265	.255	.226	.254	.279	.261	.259

********* GAS SATURATION *********

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	.100	.111	.117	.106	.118	.002	.115	.115	.092	.069	.000
2	.075	.112	.122	.118	.133	.112	.124	.117	.114	.105	.069
3	.113	.119	.120	.129	.124	.118	.119	.118	.114	.103	.100
4	.110	.110	.112	.122	.106	.118	.109	.086	.104	.097	.085
5	.101	.080	,104	.114	.118	.113	.112	.107	.108	.082	.028
6	.097	.097	.099	.103	.103	.099	.100	.093	.095	.098	.084
7	.092	.092	.094	.084	.093	.058	.085	.059	.086	.086	.085
8	.087	.088	.092	.089	.094	.086	.085	.082	.091	.082	.081
9	.084	.074	.084	.085	.085	.083	.083	.081	.080	.078	.079
10	.083	.084	.083	.084	.083	.082	.082	.080	.078	.077	.077

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	.090	.102	.102	.101	.102	.000	.102	.102	.082	.064	.000
2	.050	.102	.102	.105	.110	.104	.108	.104	.102	.101	.065
3	.102	.102	.102	.107	.108	.109	.108	.106	.102	.101	.097
4	.102	.102	.102	.102	.089	.106	.101	.072	.101	.094	.078
5	.097	.068	.101	.102	.102	.102	.102	.102	.102	.073	.001
6	.095	.094	.096	.100	.100	.094	.098	.089	.094	.097	.076
7	.089	.089	.091	.078	.089	.044	.079	.047	.084	.083	.082
8	.085	.086	.095	.087	.099	.083	.083	.081	.101	.081	.078
9	.080	.068	.081	.082	.083	.081	.080	.078	.079	.076	.076
10	.080	.080	.080	.081	.081	.079	.079	.077	.076	.075	.075

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	.067	.081	.091	.098	.096	.045	.093	.095	.073	.053	.000
2	.060	.085	.097	.104	.107	.104	.105	.102	.086	.071	.051
3	.085	.091	.100	.105	.107	.107	.105	.104	.089	.077	.074
4	.086	.085	.091	.096	.091	.104	.100	.078	.082	.072	.063
5	.080	.064	.080	.090	.094	.094	.090	.082	.075	.057	.032
6	.077	.075	.078	.080	.081	.075	.078	.071	.071	.069	.058
7	.072	.072	.073	.070	.072	.050	.065	.050	.064	.063	.063
8	.066	.066	.068	.069	.068	.065	.066	.061	.062	.061	.061
9	.064	.057	.062	.064	.064	.063	.063	.061	.058	.058	.059
10	.063	.064	.063	.065	.064	.063	.063	.061	.058	.058	.059

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	.037	.054	.067	.075	.071	.001	.067	.068	.049	.025	.001
2	.025	.061	.076	.084	.088	.077	.089	.082	.065	.046	.029
3	.062	.071	.081	.090	.102	.102	.101	.088	.070	.059	.052

.070	.064	.073	.079	.066	.102	.075	.053	.064	.053	.038
.061	.040	.059	.073	.078	.072	.072	.063	.054	.037	.000
.064	.060	.063	.065	.063	.050	.059	.049	.055	.051	.035
.061	.058	.060	.054	.053	.024	.046	.028	.048	.048	.047
.054	.051	.055	.056	.054	.049	.054	.047	.048	.047	.048
.050	.038	.047	.051	.051	.050	.051	.048	.045	.047	.046
.053	.051	.050	.052	.051	.051	.052	.048	.047	.046	.047

5

1	2	3	4	5	6	7	8	9	10	11
.045	.056	.067	.075	.073	.022	.069	.071	.050	.034	.000
.039	.062	.074	.082	.086	.078	.087	.080	.063	.048	.033
.062	.070	.078	.085	.103	.103	.102	.085	.067	.057	.051
.066	.063	.070	.075	.067	.102	.075	.055	.061	.051	.042
.059	.044	.058	.069	.073	.071	.068	.060	.054	.038	.019
.059	.057	.059	.061	.060	.052	.056	.049	.051	.049	.038
.056	.055	.056	.051	.051	.031	.045	.031	.046	.045	.044
.051	.049	.051	.052	.051	.048	.049	.044	.045	.043	.045
.047	.040	.045	.047	.047	.046	.047	.044	.041	.043	.042
.048	.047	.046	.048	.047	.048	.047	.044	.043	.042	.042

6

1	2	3	4	5	6	7	8	9	10	11
.038	.051	.062	.063	.063	.001	.058	.064	.041	.028	.000
.024	.054	.069	.076	.080	.071	.079	.075	.057	.043	.027
.056	.065	.074	.080	.102	.102	.102	.075	.061	.052	.047
.062	.058	.065	.070	.052	.098	.063	.041	.056	.046	.037
.053	.034	.053	.065	.068	.066	.062	.055	.049	.033	.000
.055	.052	.055	.056	.055	.045	.050	.043	.047	.045	.032
.052	.051	.052	.044	.046	.020	.039	.022	.040	.041	.040
.046	.045	.047	.048	.047	.042	.044	.039	.041	.039	.041
.042	.034	.041	.043	.043	.042	.043	.040	.038	.039	.039
.043	.043	.042	.044	.043	.043	.043	.040	.039	.038	.039

7

1	2	3	4	5	6	7	8	9	10	11
.034	.042	.050	.060	.057	.001	.054	.054	.038	.025	.000
.030	.048	.059	.066	.069	.061	.068	.063	.047	.035	.024
.048	.055	.063	.069	.088	.101	.101	.066	.051	.042	.038
.053	.049	.056	.060	.052	.080	.057	.042	.047	.037	.031
.046	.033	.045	.055	.059	.055	.053	.046	.040	.028	.012
.047	.045	.047	.048	.047	.039	.042	.037	.039	.036	.026
.045	.043	.044	.039	.039	.022	.034	.022	.033	.033	.031
.039	.037	.039	.040	.039	.036	.038	.032	.034	.032	.033
.035	.030	.034	.036	.036	.035	.037	.033	.030	.032	.033
.037	.037	.036	.037	.036	.036	.037	.033	.032	.032	.031

********** END OF SUMMARY REPORT **********

****
* TIME STEP SUMMARY *
****

STEP	PRODUCTION					INJECTION		PV WT AVG	MATERIAL BALANCES			MAX SATN CHANGE				MAX PRES CHANGE				ITN
	OIL	GAS	WATER	GOR SCF/	WATER /OIL	GAS	WATER	RES PRES	OIL %	GAS %	WATER %	I	J	K	DSMAX	I	J	K	DPMAX	O
DAYS	STB/D	MSCF/D	STB/D	STB	RATIO	MSCF/D	STB/D	PSIA												
9855.	752.1	443.3	546.6	589.4	.7	.0	-913.	1587.	-.007	-.006	.000	6	1	7	.001	6	3	1	.86	1 1

********** BOAST II (RELEASE 1.1) SIMULATION TERMINATED **********

APPENDIX C

PREDICTIONS MODEL

AND

RESULTS SUMMARY

```
          WATERFLOOD DISPLACEMENT FOR E.N. WOODS LEASE
RESTART DATA
-1 -1
GRID DATA
11 10 7
GRID BLOCK LENGTHS
0 0 0 0
113. 263. 244. 375. 356. 225. 169. 300. 375. 338. 113.
113. 375. 356. 375. 300. 300. 300. 338. 300. 113.
68. 10. 202. 25. 60. 15. 85.
20. 10. 195. 22. 60. 14. 79.
GRID BLOCK LENGTH MODIFICATIONS
5*0
CAPROCK BASE DEPTHS
1
1129. 1125. 1120. 1097. 1125. 1138. 1150. 1167. 1180. 1190. 1200.
1098. 1098. 1104. 1114. 1125. 1138. 1150. 1167. 1182. 1190. 1200.
1100. 1100. 1100. 1114. 1125. 1138. 1160. 1166. 1188. 1200. 1200.
1100. 1100. 1100. 1114. 1125. 1138. 1161. 1165. 1188. 1200. 1200.
1102. 1102. 1107. 1114. 1125. 1150. 1163. 1175. 1195. 1203. 1207.
1110. 1110. 1114. 1125. 1138. 1150. 1163. 1175. 1197. 1203. 1207.
1120. 1120. 1120. 1125. 1138. 1160. 1169. 1182. 1200. 1213. 1213.
1136. 1136. 1136. 1136. 1156. 1163. 1169. 1188. 1210. 1213. 1213.
1140. 1140. 1150. 1150. 1163. 1167. 1171. 1188. 1211. 1213. 1213.
1140. 1140. 1150. 1150. 1163. 1167. 1171. 1188. 1211. 1213. 1213.
POROSITY AND PERMEABILITY
0 0 0 -1
.081 .092 .098 .112 .110 .106 .086
4.1 5.2 11.2 20.4 14.5 10.9 12.9
4.1 5.2 11.2 20.4 14.5 10.9 12.9
0.7
POROSITY AND PERMEABILITY MODIFICATIONS
5*0
TRANSMISSIBILITY MODIFICATIONS
4*0
ROCK AND PVT
1 1
SAT  KROW     KRW    KRG     KROG  PCOW PCOG
-.1  6*0.
.02  6*0.
0.1  6*0.
0.2  .0115  .0285   .0237    3*0.
0.3  .0285  .0768   .0630   .0114   2*0.
0.4  .0517  .1394   .1131   .0230   2*0.
0.5  .0731  .2394   .2208   .0394   2*0.
0.6  .1167  .3878   .3478   .0629   2*0.
0.7  .1908  .6074   .5045   .0989   2*0.
0.8  .3207  .8126   .6870   .1722   2*0.
0.9  .5112  .9852   .9139   .3097   2*0.
1.1  .7330  .9852   .9211   .4786   2*0.
ITHREE SWR(IRR)
1 .20
 PBO   PBODAT PBGRAD
1800.  4400.   0.
VSLOPE   BSLOPE  RSLOPE   PMAX  REPRS
.000046 -.0000232   0.   9014.7   0
   P     MUO    BO   RSO
  14.7  1.04  1.062  1.0
1014.7  .83   1.295  371.
2014.7  .695  1.435  636.
3014.7  .594  1.565  930.
4014.7  .51   1.695  1270.
5014.7  .449  1.827  1618.
9014.7  .203  2.35   2984.
   P     MUW    BW   RSW
  14.7  .5    1.019  0.
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1014.7  .501  1.016  0.
2014.7  .502  1.013  0.
4014.7  .505  1.007  0.
6014.7  .51   1.001  0.
9014.7  .52   .992   0.
GAS AND ROCK PROP
0
   P      MUG      BG      PSI      CR
  14.7   .008    .9358    0.0   .000003
 264.7   .0096   .067902  0.0   .000003
 514.7   .0112   .035228  0.0   .000003
1014.7   .014    .017951  0.0   .000003
2014.7   .0189   .009063  0.0   .000003
2514.7   .0208   .007266  0.0   .000003
3014.7   .0228   .006064  0.0   .000003
4014.7   .0268   .004554  0.0   .000003
5014.7   .0309   .003644  0.0   .000003
9014.7   .047    .002167  0.0   .000003
RHOSCO RHOSCW RHOSCG
46.244 62.238 .0647
EQUILIBRIUM PRESSURE INITIALIZATION/CONSTANT SATURATIONS
1 1 4400. 0.0
1504. 1500. 1486. 1468. 1446. 1445. 1451. 1467. 1513. 1520. 1547.
1495. 1492. 1477. 1447. 1439. 1420. 1437. 1455. 1503. 1501. 1524.
1496. 1491. 1464. 1457. 1386. 1038. 1340. 1454. 1508. 1528. 1533.
1510. 1508. 1503. 1486. 1473. 1424. 1461. 1504. 1524. 1541. 1544.
1525. 1524. 1515. 1492. 1495. 1479. 1502. 1520. 1517. 1547. 1554.
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1515. 1510. 1497. 1479. 1457. 1458. 1462. 1479. 1524. 1533. 1559.
1506. 1502. 1488. 1459. 1450. 1435. 1449. 1467. 1514. 1515. 1537.
1506. 1502. 1476. 1468. 1404. 1091. 1366. 1467. 1518. 1539. 1543.
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1535. 1534. 1525. 1504. 1506. 1491. 1513. 1530. 1530. 1558. 1567.
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1563. 1562. 1555. 1542. 1538. 1537. 1548. 1562. 1574. 1591. 1597.
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1608. 1608. 1609. 1608. 1610. 1611. 1613. 1618. 1623. 1624. 1624.
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1578. 1574. 1561. 1539. 1524. 1516. 1529. 1551. 1587. 1598. 1607.
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1641. 1641. 1641. 1640. 1642. 1644. 1645. 1650. 1655. 1656. 1656.
1603. 1598. 1583. 1559. 1546. 1546. 1554. 1574. 1607. 1619. 1632.
1593. 1589. 1575. 1555. 1540. 1535. 1546. 1567. 1602. 1614. 1623.
1590. 1586. 1570. 1556. 1516. 1417. 1507. 1564. 1603. 1621. 1624.
1599. 1598. 1590. 1578. 1567. 1550. 1573. 1597. 1616. 1633. 1637.
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1613.	1613.	1606.	1592.	1590.	1592.	1603.	1616.	1625.	1643.	1649.
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1633.	1633.	1632.	1637.	1636.	1649.	1651.	1657.	1656.	1657.	1657.
1645.	1645.	1641.	1643.	1643.	1651.	1654.	1659.	1660.	1663.	1663.
1653.	1653.	1653.	1651.	1653.	1656.	1657.	1662.	1667.	1668.	1668.
1653.	1653.	1654.	1652.	1654.	1656.	1658.	1663.	1668.	1669.	1669.
1616.	1611.	1596.	1574.	1560.	1562.	1568.	1588.	1622.	1632.	1649.
1607.	1602.	1588.	1567.	1554.	1548.	1560.	1579.	1615.	1625.	1636.
1603.	1599.	1581.	1569.	1531.	1397.	1521.	1579.	1615.	1634.	1637.
1612.	1611.	1603.	1590.	1581.	1565.	1588.	1612.	1628.	1645.	1650.
1625.	1625.	1619.	1604.	1603.	1604.	1616.	1629.	1636.	1656.	1663.
1634.	1633.	1631.	1630.	1631.	1639.	1643.	1651.	1654.	1653.	1659.
1644.	1644.	1644.	1650.	1648.	1662.	1663.	1670.	1668.	1668.	1669.
1656.	1656.	1652.	1654.	1653.	1662.	1665.	1671.	1670.	1674.	1675.
1664.	1664.	1664.	1662.	1664.	1667.	1668.	1673.	1678.	1679.	1679.
1664.	1664.	1665.	1663.	1665.	1667.	1669.	1674.	1679.	1680.	1680.
1633.	1628.	1613.	1590.	1578.	1578.	1586.	1607.	1638.	1649.	1662.
1623.	1619.	1606.	1586.	1573.	1568.	1579.	1600.	1633.	1645.	1654.
1620.	1616.	1601.	1587.	1554.	1471.	1549.	1598.	1633.	1651.	1654.
1628.	1627.	1619.	1607.	1598.	1586.	1607.	1628.	1646.	1662.	1666.
1641.	1641.	1635.	1622.	1620.	1623.	1634.	1646.	1655.	1673.	1679.
1649.	1649.	1647.	1646.	1647.	1655.	1660.	1667.	1671.	1671.	1677.
1659.	1659.	1659.	1664.	1664.	1677.	1679.	1685.	1684.	1685.	1685.
1671.	1671.	1668.	1669.	1670.	1678.	1681.	1687.	1688.	1690.	1690.
1678.	1679.	1679.	1677.	1679.	1682.	1683.	1688.	1693.	1694.	1694.
1679.	1679.	1680.	1678.	1680.	1682.	1684.	1688.	1694.	1694.	1694.
.693	.769	.770	.514	.682	.003	.676	.729	.534	.474	.001
.466	.736	.765	.738	.747	.550	.745	.771	.759	.659	.484
.755	.768	.769	.761	.697	.653	.706	.727	.776	.786	.781
.780	.763	.724	.767	.564	.680	.664	.554	.785	.786	.696
.781	.575	.753	.774	.773	.768	.777	.779	.764	.669	.164
.793	.789	.791	.776	.786	.724	.785	.751	.793	.785	.722
.799	.798	.794	.634	.773	.490	.757	.525	.783	.804	.803
.803	.797	.798	.801	.794	.792	.806	.797	.796	.808	.810
.805	.681	.799	.806	.805	.807	.808	.810	.810	.812	.812
.807	.806	.807	.807	.807	.808	.809	.811	.812	.813	.814
.634	.765	.778	.440	.661	.002	.651	.705	.453	.438	.000
.307	.706	.776	.720	.757	.531	.740	.775	.754	.612	.444
.742	.779	.777	.776	.662	.624	.666	.697	.783	.783	.773
.784	.755	.704	.782	.505	.635	.614	.481	.783	.780	.659
.777	.502	.731	.777	.784	.759	.781	.777	.742	.619	.021
.792	.787	.790	.768	.783	.677	.779	.718	.789	.774	.689
.798	.798	.792	.582	.758	.358	.729	.420	.766	.802	.801
.801	.793	.789	.799	.781	.785	.805	.789	.776	.806	.808
.804	.640	.794	.805	.803	.806	.808	.809	.806	.811	.811
.807	.806	.806	.806	.806	.808	.809	.810	.810	.812	.812
.507	.617	.650	.579	.622	.238	.621	.638	.536	.444	.000
.436	.633	.690	.681	.679	.537	.677	.689	.679	.593	.433
.658	.697	.704	.698	.649	.621	.648	.658	.707	.707	.670
.716	.676	.693	.708	.594	.631	.607	.583	.713	.683	.575
.712	.543	.661	.704	.715	.673	.703	.702	.671	.567	.268
.730	.721	.729	.710	.713	.624	.707	.661	.721	.716	.620
.736	.736	.740	.660	.708	.483	.684	.525	.710	.730	.726
.734	.722	.731	.747	.726	.731	.754	.731	.725	.742	.744
.737	.644	.713	.739	.735	.742	.757	.747	.737	.747	.747
.744	.749	.737	.748	.740	.745	.758	.748	.739	.748	.748
.282	.467	.526	.444	.526	.014	.516	.495	.328	.221	.000
.119	.493	.590	.599	.618	.434	.609	.607	.564	.464	.202
.531	.610	.646	.658	.566	.530	.551	.570	.652	.630	.557
.668	.567	.610	.664	.488	.519	.499	.451	.651	.567	.417
.641	.363	.552	.644	.668	.560	.633	.613	.571	.401	.019
.695	.674	.692	.649	.633	.433	.604	.505	.651	.633	.466
.703	.700	.705	.554	.598	.172	.554	.290	.599	.677	.662
.691	.651	.688	.721	.682	.659	.727	.656	.679	.708	.709
.677	.494	.629	.703	.696	.710	.734	.717	.697	.713	.716
.709	.710	.696	.720	.706	.715	.736	.718	.698	.715	.715

.456	.571	.615	.540	.602	.030	.597	.599	.475	.374	.000
.384	.596	.669	.670	.674	.503	.669	.680	.652	.548	.361
.620	.680	.703	.704	.626	.592	.622	.645	.708	.695	.637
.715	.653	.679	.711	.563	.602	.587	.550	.712	.658	.538
.692	.490	.632	.701	.719	.659	.703	.695	.652	.525	.215
.732	.714	.730	.706	.701	.577	.692	.627	.715	.694	.562
.738	.737	.741	.633	.676	.404	.647	.464	.683	.726	.711
.730	.710	.731	.752	.725	.708	.760	.709	.726	.745	.744
.727	.605	.693	.739	.734	.744	.763	.750	.736	.747	.749
.744	.747	.735	.751	.740	.746	.765	.751	.736	.748	.750
.419	.558	.607	.436	.545	.008	.546	.569	.369	.328	.004
.191	.549	.653	.643	.654	.458	.648	.666	.631	.522	.322
.583	.666	.695	.697	.583	.557	.582	.607	.698	.683	.619
.705	.630	.655	.704	.457	.560	.531	.424	.704	.644	.505
.660	.385	.604	.691	.714	.646	.695	.685	.634	.485	.005
.727	.702	.724	.692	.691	.535	.677	.592	.704	.674	.523
.734	.732	.734	.566	.647	.249	.603	.333	.656	.716	.697
.725	.703	.725	.746	.716	.683	.753	.686	.715	.738	.738
.718	.563	.684	.733	.727	.738	.757	.744	.729	.742	.743
.739	.740	.729	.746	.735	.742	.758	.745	.729	.742	.743
.385	.503	.542	.514	.550	.002	.539	.548	.421	.335	.000
.318	.548	.623	.630	.630	.456	.625	.629	.596	.499	.320
.564	.631	.662	.666	.584	.539	.568	.602	.657	.637	.575
.673	.603	.640	.672	.520	.567	.544	.504	.662	.602	.489
.642	.436	.581	.657	.682	.612	.657	.647	.595	.475	.166
.694	.670	.692	.664	.654	.533	.646	.582	.666	.638	.501
.701	.699	.708	.605	.633	.351	.599	.422	.638	.675	.654
.686	.666	.688	.721	.677	.658	.729	.658	.674	.703	.703
.685	.571	.643	.697	.688	.704	.735	.711	.689	.706	.708
.705	.713	.690	.716	.699	.709	.737	.713	.689	.707	.710
.207	.120	.114	.379	.200	.995	.209	.156	.375	.457	.999
.459	.151	.113	.144	.120	.338	.131	.112	.127	.236	.447
.132	.112	.111	.110	.180	.229	.175	.156	.110	.111	.119
.110	.128	.164	.111	.331	.203	.227	.360	.111	.117	.219
.118	.345	.142	.112	.110	.118	.111	.114	.128	.249	.808
.110	.114	.110	.121	.112	.177	.115	.155	.111	.117	.194
.109	.110	.113	.282	.134	.452	.158	.416	.131	.110	.112
.110	.115	.110	.111	.112	.122	.109	.120	.112	.110	.110
.111	.245	.117	.110	.110	.110	.109	.110	.110	.110	.110
.110	.110	.110	.109	.110	.110	.109	.110	.110	.110	.110
.276	.133	.120	.459	.237	.998	.247	.194	.465	.498	1.000
.643	.192	.122	.175	.133	.365	.152	.121	.144	.286	.491
.156	.119	.121	.116	.230	.267	.227	.197	.115	.116	.130
.114	.143	.194	.115	.406	.259	.285	.447	.115	.127	.263
.126	.430	.168	.121	.114	.140	.117	.121	.156	.309	.978
.113	.120	.114	.132	.117	.229	.123	.193	.117	.129	.235
.113	.113	.118	.340	.154	.598	.192	.532	.151	.115	.117
.114	.121	.116	.115	.121	.132	.112	.130	.123	.114	.113
.115	.292	.125	.113	.114	.113	.112	.113	.115	.113	.113
.113	.114	.114	.113	.113	.113	.112	.113	.114	.113	.113
.425	.302	.259	.323	.282	.717	.287	.267	.391	.503	1.000
.504	.281	.213	.215	.214	.359	.218	.208	.236	.336	.517
.256	.211	.197	.197	.244	.273	.247	.238	.204	.216	.256
.197	.240	.216	.197	.315	.265	.293	.338	.205	.245	.363
.208	.394	.259	.206	.191	.233	.207	.216	.254	.376	.700
.193	.204	.194	.210	.206	.302	.215	.269	.208	.215	.322
.191	.193	.187	.270	.219	.467	.251	.424	.226	.207	.210
.200	.212	.201	.185	.207	.204	.180	.207	.214	.197	.195
.199	.299	.225	.197	.202	.194	.180	.192	.204	.195	.194
.193	.187	.200	.188	.196	.192	.179	.191	.203	.194	.193
.681	.479	.407	.481	.402	.985	.417	.436	.623	.754	.999
.855	.446	.334	.317	.294	.489	.302	.311	.371	.489	.769
.407	.318	.272	.251	.331	.368	.348	.342	.278	.311	.391
.262	.369	.317	.257	.446	.380	.426	.496	.284	.380	.545
.298	.598	.389	.283	.253	.368	.295	.324	.374	.562	.981
.241	.266	.245	.286	.304	.517	.337	.446	.294	.316	.499

```
.236 .241 .235 .392 .349 .804 .401 .683 .353 .275 .291
.255 .298 .257 .224 .264 .291 .219 .297 .273 .245 .243
.274 .467 .325 .246 .253 .239 .215 .235 .258 .240 .238
.238 .239 .253 .228 .243 .234 .212 .234 .255 .239 .237
.499 .372 .317 .385 .325 .948 .334 .329 .475 .592 1.000
.576 .342 .257 .248 .240 .419 .244 .240 .286 .405 .606
.318 .251 .218 .211 .271 .305 .276 .270 .225 .248 .311
.219 .284 .251 .214 .370 .296 .338 .395 .227 .291 .420
.249 .466 .309 .230 .208 .270 .230 .245 .294 .437 .766
.209 .229 .211 .233 .239 .371 .252 .324 .234 .257 .400
.206 .209 .203 .316 .272 .565 .307 .504 .271 .230 .245
.219 .241 .218 .197 .224 .244 .192 .247 .229 .212 .211
.227 .356 .262 .214 .219 .210 .190 .206 .222 .210 .209
.208 .206 .219 .201 .212 .206 .188 .205 .221 .210 .209
.542 .391 .331 .501 .392 .991 .396 .367 .590 .643 .996
.785 .397 .279 .281 .266 .471 .273 .259 .312 .435 .651
.361 .270 .232 .223 .315 .341 .316 .318 .241 .265 .334
.233 .313 .280 .226 .490 .342 .406 .535 .240 .310 .459
.287 .581 .343 .244 .218 .288 .243 .260 .317 .482 .995
.219 .246 .221 .252 .254 .420 .272 .365 .249 .282 .445
.215 .217 .214 .390 .308 .731 .358 .645 .304 .243 .263
.229 .253 .227 .206 .238 .275 .203 .276 .244 .223 .221
.240 .403 .275 .223 .230 .219 .200 .216 .233 .220 .218
.217 .216 .229 .210 .222 .215 .199 .215 .232 .219 .218
.581 .456 .408 .426 .392 .996 .406 .398 .541 .640 1.000
.652 .404 .318 .304 .302 .483 .307 .308 .357 .466 .656
.387 .314 .275 .265 .329 .360 .331 .332 .292 .321 .386
.275 .348 .304 .268 .427 .353 .399 .454 .292 .360 .480
.313 .531 .373 .288 .259 .333 .290 .307 .365 .497 .821
.259 .285 .261 .287 .299 .429 .312 .381 .295 .325 .472
.255 .258 .248 .356 .328 .627 .367 .556 .329 .292 .314
.274 .297 .273 .239 .284 .306 .233 .311 .292 .266 .264
.280 .398 .323 .267 .276 .260 .229 .255 .282 .261 .259
.258 .250 .274 .247 .265 .255 .226 .254 .279 .261 .259
KSN1 KSM1 KCO1 KCOF
4*0
NMAX FACT1 FACT2 TMAX  WORMAX GORMAX PAMIN PAMAX
730   1.    1.  3650.    95.  500000.  15. 10000.
KSOL MITR OMEGA TOL TOL1 DSMAX DPMAX
4    250   1.7  .1   .0   .05   100.
NUMDIS IRK THRUIN
0       0    .5
AQUIFER DATA
0
RECURRENT DATA
DATA SET #1
730 1 10
365. 730. 1095. 1460. 1825. 2190. 2555. 2920. 3285. 3650.
1 1 1 1 0 0
5. 1. 20.
WELL INFORMATION
28 0
---CURRENT ACTIVE WELLS---
P-1    1  3  3  1  7
1.058 1.044 2.933 1.494 1.867 1.113 1.970
7*1587.
P-1    1 -1      0.        0.        0.        0.
P-2A   2 10  2  1  7
1.056 1.043 2.864 1.476 1.837 1.109 1.936
7*1587.
P-2A   2 -1      0.        0.        0.        0.
P-4    3  9  8  1  7
1.056 1.043 2.864 1.476 1.837 1.109 1.936
7*1587.
P-4    3 -1      0.        0.        0.        0.
P-3    4  3  8  1  7
```

```
1.116 1.088 4.886 1.992 2.774 1.228 2.950
7*1587.
P-3    4 -1      0.        0.        0.        0.
P-5    5  6  5  1  7
1.120 1.090 4.962 2.012 2.778 1.232 2.990
7*1587.
P-5    5 -1      0.        0.        0.        0.
I-70   6  2  9  1  7
1.118 1.090 4.902 2.996 2.752 1.228 2.958
7*1587.
I-70   6  2      0.     -388.8       0.        0.
I-71   7  6  10 1  7
1.132 1.100 5.390 2.122 2.970 1.256 3.204
7*1587.
I-71   7  2      0.     -388.8       0.        0.
I-72   8 11  10 1  7
1.142 1.108 5.752 2.214 3.132 1.278 3.384
7*1587.
I-72   8  2      0.     -388.8       0.        0.
I-75   9  2  5  1  7
1.118 1.090 4.902 1.996 2.752 1.224 2.958
7*1587.
I-75   9  2      0.     -388.8       0.        0.
I-76  10 1  2  1  7
1.124 1.096 5.156 2.062 2.864 1.244 3.086
7*1587.
I-76  10  2      0.     -388.8       0.        0.
I-104 11 11 5  1  7
1.124 1.096 5.156 2.062 2.864 1.244 3.086
7*1587.
I-104 11  2      0.     -388.8       0.        0.
I-204 12 11 1  1  7
1.128 1.098 5.236 2.086 2.910 1.250 3.136
7*1587.
I-204 12  2      0.     -388.8       0.        0.
I-317 13  6  1  1  7
1.132 1.100 5.390 2.112 2.970 1.236 3.204
7*1587.
I-317 13  2      0.     -388.8       0.        0.
P-6   14  9  5  1  7
1.114 1.086 4.770 1.964 2.692 1.220 2.892
7*1587.
P-6   14 -1      0.        0.        0.        0.
P-7   15  5  8  1  7
1.112 1.086 4.748 1.958 2.682 1.220 2.880
7*1587.
P-7   15 -1      0.        0.        0.        0.
P-8   16  4  5  1  7
1.114 1.086 4.770 1.964 2.692 1.220 2.892
7*1587.
P-8   16 -1      0.        0.        0.        0.
I-9   17  6  7  1  7
1.120 1.090 4.962 2.012 2.778 1.228 2.990
7*1587.
I-9   17  2      0.     -388.8       0.        0.
I-10  18  8  4  1  7
1.114 1.086 4.770 1.964 2.692 1.220 2.892
7*1587.
I-10  18  2      0.     -388.8       0.        0.
I-11  19  5  4  1  7
1.112 1.084 4.710 1.948 2.666 1.218 2.862
7*1587.
I-11  19  2      0.     -388.8       0.        0.
I-12R 20  8  7  1  7
1.116 1.088 4.852 1.984 2.728 1.226 2.934
7*1587.
```

```
I-12R 20  2      0.      -388.8       0.        0.
P-13  21  6  3  1  7
1.059 1.044 3.929 1.493 1.866 1.113 1.968
7*1587.
P-13  21 -1     0.       0.        0.        0.
I-329 22  4  1  1  7
1.124 1.096 5.156 2.062 2.864 1.244 3.086
7*1587.
I-329 22  2      0.      -388.8       0.        0.
I-330 23  9  1  1  7
1.124 1.096 5.156 2.062 2.864 1.244 3.086
7*1587.
I-330 23  2      0.      -388.8       0.        0.
I-14  24  4  7  1  7
1.114 1.086 4.790 1.968 2.700 1.222 2.902
7*1587.
I-14  24  2      0.      -388.8       0.        0.
P-15  25  4  2  1  7
1.112 1.086 4.728 1.952 2.674 1.218 2.872
7*1587.
P-15  25 -1    0.       0.        0.        0.
P-16  26  8  2  1  7
1.114 1.086 4.770 1.964 2.692 1.220 2.892
7*1587.
P-16  26 -1    0.       0.        0.        0.
I-17  27  3  4  1  7
1.116 1.088 4.846 1.982 2.726 1.226 2.930
7*1587.
I-17  27  2     0.      -388.8       0.       0.
P-18  28 10  6  1  7
1.114 1.088 4.808 1.972 2.708 1.222 2.912
7*1587.
P-18  28 -1    0.       0.        0.        0.
```

```
*****************************************************************
*                                                               *
*                                                               *
*                          BOAST II:                            *
*                 BLACK OIL APPLIED SIMULATION TOOL             *
*                         (RELEASE 1.1)                         *
*                                                               *
*                                                               *
*****************************************************************
```

```
*******************************************************************************
*                                                                             *
*          WATERFLOOD DISPLACEMENT FOR E.N. WOODS LEASE                       *
*                                                                             *
*******************************************************************************
```

REDIMENSIONING INFORMATION:

MAX X-DIRECTION GRID BLOCKS	15
MAX Y-DIRECTION GRID BLOCKS	15
MAX Z-DIRECTION GRID BLOCKS	7
MAX ROCK REGIONS	3
MAX ROCK REGION TABLE ENTRIES	25
MAX PVT REGIONS	3
MAX PVT REGION TABLE ENTRIES	25
MAX WELLS	50
MAX TIME STEPS	20000
MAX RESTART RECORDS	5
TOTAL BLOCKS USING 1D DIRECT SOLN METHODS	13
TOTAL BLOCKS USING 2D OR 3D DIRECT SOLN METHODS	1
TOTAL BLOCKS USING ITERATIVE SOLN METHOD	1575
MAX NO OF BLOCKS IN 1D FOR LSOR	13
MAX NO OF BLOCKS IN 2D FOR L2SOR	1

```
*******************************************************************************
*                                                                             *
*          WATERFLOOD DISPLACEMENT FOR E.N. WOODS LEASE                       *
*                                                                             *
*******************************************************************************
```

***** RESTART OPTION *****

RESTART OPTION HAS NOT BEEN ACTIVATED.

***** INITIALIZATION DATA *****

GRID SIZE (DX) IN COLUMN 1 IS INITIALLY SET AT 113.00 FOR ALL NODES

GRID SIZE (DX) IN COLUMN 2 IS INITIALLY SET AT 263.00 FOR ALL NODES

GRID SIZE (DX) IN COLUMN 3 IS INITIALLY SET AT 244.00 FOR ALL NODES

GRID SIZE (DX) IN COLUMN 4 IS INITIALLY SET AT 375.00 FOR ALL NODES

GRID SIZE (DX) IN COLUMN 5 IS INITIALLY SET AT 356.00 FOR ALL NODES

GRID SIZE (DX) IN COLUMN 6 IS INITIALLY SET AT 225.00 FOR ALL NODES

GRID SIZE (DX) IN COLUMN 7 IS INITIALLY SET AT 169.00 FOR ALL NODES

GRID SIZE (DX) IN COLUMN 8 IS INITIALLY SET AT 300.00 FOR ALL NODES

GRID SIZE (DX) IN COLUMN 9 IS INITIALLY SET AT 375.00 FOR ALL NODES

GRID SIZE (DX) IN COLUMN 10 IS INITIALLY SET AT 338.00 FOR ALL NODES

GRID SIZE (DX) IN COLUMN 11 IS INITIALLY SET AT 113.00 FOR ALL NODES

```
GRID SIZE (DY) IN ROW      1 IS INITIALLY SET AT  113.00 FOR ALL NODES
GRID SIZE (DY) IN ROW      2 IS INITIALLY SET AT  375.00 FOR ALL NODES
GRID SIZE (DY) IN ROW      3 IS INITIALLY SET AT  356.00 FOR ALL NODES
GRID SIZE (DY) IN ROW      4 IS INITIALLY SET AT  375.00 FOR ALL NODES
GRID SIZE (DY) IN ROW      5 IS INITIALLY SET AT  300.00 FOR ALL NODES
GRID SIZE (DY) IN ROW      6 IS INITIALLY SET AT  300.00 FOR ALL NODES
GRID SIZE (DY) IN ROW      7 IS INITIALLY SET AT  300.00 FOR ALL NODES
GRID SIZE (DY) IN ROW      8 IS INITIALLY SET AT  338.00 FOR ALL NODES
GRID SIZE (DY) IN ROW      9 IS INITIALLY SET AT  300.00 FOR ALL NODES
GRID SIZE (DY) IN ROW     10 IS INITIALLY SET AT  113.00 FOR ALL NODES

GRID SIZE (DZ) IN LAYER    1 IS INITIALLY SET AT   68.00 FOR ALL NODES
GRID SIZE (DZ) IN LAYER    2 IS INITIALLY SET AT   10.00 FOR ALL NODES
GRID SIZE (DZ) IN LAYER    3 IS INITIALLY SET AT  202.00 FOR ALL NODES
GRID SIZE (DZ) IN LAYER    4 IS INITIALLY SET AT   25.00 FOR ALL NODES
GRID SIZE (DZ) IN LAYER    5 IS INITIALLY SET AT   60.00 FOR ALL NODES
GRID SIZE (DZ) IN LAYER    6 IS INITIALLY SET AT   15.00 FOR ALL NODES
GRID SIZE (DZ) IN LAYER    7 IS INITIALLY SET AT   85.00 FOR ALL NODES

GRID SIZE (DZNET) IN LAYER    1 IS INITIALLY SET AT   20.00 FOR ALL NODES
GRID SIZE (DZNET) IN LAYER    2 IS INITIALLY SET AT   10.00 FOR ALL NODES
GRID SIZE (DZNET) IN LAYER    3 IS INITIALLY SET AT  195.00 FOR ALL NODES
GRID SIZE (DZNET) IN LAYER    4 IS INITIALLY SET AT   22.00 FOR ALL NODES
GRID SIZE (DZNET) IN LAYER    5 IS INITIALLY SET AT   60.00 FOR ALL NODES
GRID SIZE (DZNET) IN LAYER    6 IS INITIALLY SET AT   14.00 FOR ALL NODES
GRID SIZE (DZNET) IN LAYER    7 IS INITIALLY SET AT   79.00 FOR ALL NODES

********** DEPTHS TO GRID BLOCK TOPS **********

K = 1

  1129.  1125.  1120.  1097.  1125.  1138.  1150.  1167.  1180.  1190.  1200.
  1098.  1098.  1104.  1114.  1125.  1138.  1150.  1167.  1182.  1190.  1200.
  1100.  1100.  1100.  1114.  1125.  1138.  1160.  1166.  1188.  1200.  1200.
  1100.  1100.  1100.  1114.  1125.  1138.  1161.  1165.  1188.  1200.  1200.
  1102.  1102.  1107.  1114.  1125.  1150.  1163.  1175.  1195.  1203.  1207.
  1110.  1110.  1114.  1125.  1138.  1150.  1163.  1175.  1197.  1203.  1207.
  1120.  1120.  1120.  1125.  1138.  1160.  1169.  1182.  1200.  1213.  1213.
  1136.  1136.  1136.  1136.  1156.  1163.  1169.  1188.  1210.  1213.  1213.
  1140.  1140.  1150.  1150.  1163.  1167.  1171.  1188.  1211.  1213.  1213.
  1140.  1140.  1150.  1150.  1163.  1167.  1171.  1188.  1211.  1213.  1213.

K = 2

  1197.  1193.  1188.  1165.  1193.  1206.  1218.  1235.  1248.  1258.  1268.
  1166.  1166.  1172.  1182.  1193.  1206.  1218.  1235.  1250.  1258.  1268.
  1168.  1168.  1168.  1182.  1193.  1206.  1228.  1234.  1256.  1268.  1268.
  1168.  1168.  1168.  1182.  1193.  1206.  1229.  1233.  1256.  1268.  1268.
  1170.  1170.  1175.  1182.  1193.  1218.  1231.  1243.  1263.  1271.  1275.
```

1178.	1178.	1182.	1193.	1206.	1218.	1231.	1243.	1265.	1271.	1275.
1188.	1188.	1188.	1193.	1206.	1228.	1237.	1250.	1268.	1281.	1281.
1204.	1204.	1204.	1204.	1224.	1231.	1237.	1256.	1278.	1281.	1281.
1208.	1208.	1218.	1218.	1231.	1235.	1239.	1256.	1279.	1281.	1281.
1208.	1208.	1218.	1218.	1231.	1235.	1239.	1256.	1279.	1281.	1281.

K = 3

1207.	1203.	1198.	1175.	1203.	1216.	1228.	1245.	1258.	1268.	1278.
1176.	1176.	1182.	1192.	1203.	1216.	1228.	1245.	1260.	1268.	1278.
1178.	1178.	1178.	1192.	1203.	1216.	1238.	1244.	1266.	1278.	1278.
1178.	1178.	1178.	1192.	1203.	1216.	1239.	1243.	1266.	1278.	1278.
1180.	1180.	1185.	1192.	1203.	1228.	1241.	1253.	1273.	1281.	1285.
1188.	1188.	1192.	1203.	1216.	1228.	1241.	1253.	1275.	1281.	1285.
1198.	1198.	1198.	1203.	1216.	1238.	1247.	1260.	1278.	1291.	1291.
1214.	1214.	1214.	1214.	1234.	1241.	1247.	1266.	1288.	1291.	1291.
1218.	1218.	1228.	1228.	1241.	1245.	1249.	1266.	1289.	1291.	1291.
1218.	1218.	1228.	1228.	1241.	1245.	1249.	1266.	1289.	1291.	1291.

K = 4

1409.	1405.	1400.	1377.	1405.	1418.	1430.	1447.	1460.	1470.	1480.
1378.	1378.	1384.	1394.	1405.	1418.	1430.	1447.	1462.	1470.	1480.
1380.	1380.	1380.	1394.	1405.	1418.	1440.	1446.	1468.	1480.	1480.
1380.	1380.	1380.	1394.	1405.	1418.	1441.	1445.	1468.	1480.	1480.
1382.	1382.	1387.	1394.	1405.	1430.	1443.	1455.	1475.	1483.	1487.
1390.	1390.	1394.	1405.	1418.	1430.	1443.	1455.	1477.	1483.	1487.
1400.	1400.	1400.	1405.	1418.	1440.	1449.	1462.	1480.	1493.	1493.
1416.	1416.	1416.	1416.	1436.	1443.	1449.	1468.	1490.	1493.	1493.
1420.	1420.	1430.	1430.	1443.	1447.	1451.	1468.	1491.	1493.	1493.
1420.	1420.	1430.	1430.	1443.	1447.	1451.	1468.	1491.	1493.	1493.

K = 5

1434.	1430.	1425.	1402.	1430.	1443.	1455.	1472.	1485.	1495.	1505.
1403.	1403.	1409.	1419.	1430.	1443.	1455.	1472.	1487.	1495.	1505.
1405.	1405.	1405.	1419.	1430.	1443.	1465.	1471.	1493.	1505.	1505.
1405.	1405.	1405.	1419.	1430.	1443.	1466.	1470.	1493.	1505.	1505.
1407.	1407.	1412.	1419.	1430.	1455.	1468.	1480.	1500.	1508.	1512.
1415.	1415.	1419.	1430.	1443.	1455.	1468.	1480.	1502.	1508.	1512.
1425.	1425.	1425.	1430.	1443.	1465.	1474.	1487.	1505.	1518.	1518.
1441.	1441.	1441.	1441.	1461.	1468.	1474.	1493.	1515.	1518.	1518.
1445.	1445.	1455.	1455.	1468.	1472.	1476.	1493.	1516.	1518.	1518.
1445.	1445.	1455.	1455.	1468.	1472.	1476.	1493.	1516.	1518.	1518.

K = 6

1494.	1490.	1485.	1462.	1490.	1503.	1515.	1532.	1545.	1555.	1565.
1463.	1463.	1469.	1479.	1490.	1503.	1515.	1532.	1547.	1555.	1565.
1465.	1465.	1465.	1479.	1490.	1503.	1525.	1531.	1553.	1565.	1565.
1465.	1465.	1465.	1479.	1490.	1503.	1526.	1530.	1553.	1565.	1565.
1467.	1467.	1472.	1479.	1490.	1515.	1528.	1540.	1560.	1568.	1572.
1475.	1475.	1479.	1490.	1503.	1515.	1528.	1540.	1562.	1568.	1572.
1485.	1485.	1485.	1490.	1503.	1525.	1534.	1547.	1565.	1578.	1578.
1501.	1501.	1501.	1501.	1521.	1528.	1534.	1553.	1575.	1578.	1578.
1505.	1505.	1515.	1515.	1528.	1532.	1536.	1553.	1576.	1578.	1578.
1505.	1505.	1515.	1515.	1528.	1532.	1536.	1553.	1576.	1578.	1578.

K = 7

1509.	1505.	1500.	1477.	1505.	1518.	1530.	1547.	1560.	1570.	1580.
1478.	1478.	1484.	1494.	1505.	1518.	1530.	1547.	1562.	1570.	1580.
1480.	1480.	1480.	1494.	1505.	1518.	1540.	1546.	1568.	1580.	1580.
1480.	1480.	1480.	1494.	1505.	1518.	1541.	1545.	1568.	1580.	1580.
1482.	1482.	1487.	1494.	1505.	1530.	1543.	1555.	1575.	1583.	1587.
1490.	1490.	1494.	1505.	1518.	1530.	1543.	1555.	1577.	1583.	1587.
1500.	1500.	1500.	1505.	1518.	1540.	1549.	1562.	1580.	1593.	1593.
1516.	1516.	1516.	1516.	1536.	1543.	1549.	1568.	1590.	1593.	1593.
1520.	1520.	1530.	1530.	1543.	1547.	1551.	1568.	1591.	1593.	1593.
1520.	1520.	1530.	1530.	1543.	1547.	1551.	1568.	1591.	1593.	1593.

POROSITY IN LAYER 1 IS INITIALLY SET AT .08100 FOR ALL NODES

POROSITY IN LAYER 2 IS INITIALLY SET AT .09200 FOR ALL NODES

POROSITY IN LAYER 3 IS INITIALLY SET AT .09800 FOR ALL NODES

POROSITY IN LAYER 4 IS INITIALLY SET AT .11200 FOR ALL NODES

POROSITY IN LAYER 5 IS INITIALLY SET AT .11000 FOR ALL NODES

POROSITY IN LAYER 6 IS INITIALLY SET AT .10600 FOR ALL NODES

POROSITY IN LAYER 7 IS INITIALLY SET AT .08600 FOR ALL NODES

PERMEABILITY (KX) IN LAYER 1 IS INITIALLY SET AT 4.10 FOR ALL NODES
PERMEABILITY (KX) IN LAYER 2 IS INITIALLY SET AT 5.20 FOR ALL NODES
PERMEABILITY (KX) IN LAYER 3 IS INITIALLY SET AT 11.20 FOR ALL NODES
PERMEABILITY (KX) IN LAYER 4 IS INITIALLY SET AT 20.40 FOR ALL NODES
PERMEABILITY (KX) IN LAYER 5 IS INITIALLY SET AT 14.50 FOR ALL NODES
PERMEABILITY (KX) IN LAYER 6 IS INITIALLY SET AT 10.90 FOR ALL NODES
PERMEABILITY (KX) IN LAYER 7 IS INITIALLY SET AT 12.90 FOR ALL NODES

PERMEABILITY (KY) IN LAYER 1 IS INITIALLY SET AT 4.10 FOR ALL NODES
PERMEABILITY (KY) IN LAYER 2 IS INITIALLY SET AT 5.20 FOR ALL NODES
PERMEABILITY (KY) IN LAYER 3 IS INITIALLY SET AT 11.20 FOR ALL NODES
PERMEABILITY (KY) IN LAYER 4 IS INITIALLY SET AT 20.40 FOR ALL NODES
PERMEABILITY (KY) IN LAYER 5 IS INITIALLY SET AT 14.50 FOR ALL NODES
PERMEABILITY (KY) IN LAYER 6 IS INITIALLY SET AT 10.90 FOR ALL NODES
PERMEABILITY (KY) IN LAYER 7 IS INITIALLY SET AT 12.90 FOR ALL NODES

PERMEABILITY (KZ) IS INITIALLY SET AT .7000 FOR ALL NODES

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***** EMPIRICAL DATA TABLES *****

*** NUMBER OF REGIONS ***
ROCK 1
PVT 1

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ROCK REGION # 1

SATURATION	KROT	KRW	KRG	KROG	PCOW (PSI)	PCGO (PSI)
-.1000	.0000	.0000	.0000	.0000	.0000	.0000
.0200	.0000	.0000	.0000	.0000	.0000	.0000
.1000	.0000	.0000	.0000	.0000	.0000	.0000
.2000	.0115	.0285	.0237	.0000	.0000	.0000
.3000	.0285	.0768	.0630	.0114	.0000	.0000
.4000	.0517	.1394	.1131	.0230	.0000	.0000
.5000	.0731	.2394	.2208	.0394	.0000	.0000

.6000	.1167	.3878	.3478	.0629	.0000	.0000
.7000	.1908	.6074	.5045	.0989	.0000	.0000
.8000	.3207	.8126	.6870	.1722	.0000	.0000
.9000	.5112	.9852	.9139	.3097	.0000	.0000
1.1000	.7330	.9852	.9211	.4786	.0000	.0000

THE THREE-PHASE REL. PERM. CALC. IS USED.
IRREDUCIBLE WATER SATURATION IS .2000

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PVT REGION # 1

BUBBLE POINT PARAMETERS:

BUBBLE POINT PRESSURE (PSI)	1800.000
BUBBLE POINT DEPTH (FT)	4400.000
BUBBLE POINT GRADIENT (PSI/FT)	.000

VSLOPE (CP/PSI)	BSLOPE (RB/STB/PSI)	RSLOPE (1/PSI)	PMAX (PSI)	REPRS
.460E-04	-.232E-04	.00	9014.70	0

**** SATURATED OIL PVT PROPERTIES ****

PRESSURE (PSI)	VISCOSITY (CP)	FVF (RB/STB)	SOLN. GAS (SCF/STB)
14.7	1.0400	1.0620	1.00
1014.7	.8300	1.2950	371.00
2014.7	.6950	1.4350	636.00
3014.7	.5940	1.5650	930.00
4014.7	.5100	1.6950	1270.00
5014.7	.4490	1.8270	1618.00
9014.7	.2030	2.3500	2984.00

**** WATER PVT PROPERTIES ***

PRESSURE (PSI)	VISCOSITY (CP)	FVF (RB/STB)	SOLN. GAS (SCF/STB)
14.7	.5000	1.0190	.00
1014.7	.5010	1.0160	.00
2014.7	.5020	1.0130	.00
4014.7	.5050	1.0070	.00
6014.7	.5100	1.0010	.00
9014.7	.5200	.9920	.00

**** GAS PVT AND ROCK COMP. ****

PRESSURE (PSI)	VISCOSITY (CP)	FVF (RCF/SCF)	PSEUDO-PRS (PSIA**2/CP)	ROCK COMP. (1/PSI)
14.7	.0080	.9358E+00	.0000E+00	.300E-05
264.7	.0096	.6790E-01	.0000E+00	.300E-05
514.7	.0112	.3523E-01	.0000E+00	.300E-05
1014.7	.0140	.1795E-01	.0000E+00	.300E-05
2014.7	.0189	.9063E-02	.0000E+00	.300E-05
2514.7	.0208	.7266E-02	.0000E+00	.300E-05
3014.7	.0228	.6064E-02	.0000E+00	.300E-05
4014.7	.0268	.4554E-02	.0000E+00	.300E-05
5014.7	.0309	.3644E-02	.0000E+00	.300E-05
9014.7	.0470	.2167E-02	.0000E+00	.300E-05

*** DENSITIES AT STD. CONDITIONS ***

OIL (LBM/SCF)	WATER (LBM/SCF)	GAS (LBM/SCF)
46.2440	62.2380	.0647

***** SLOPES FOR COMPRESSIBILITY CALCULATIONS ****

PRESSURE (PSI)	BO (RB/STB)	DBO/DP (RB/STB/PSI)	RSO (CF/CF)	DRSO/DP (1/PSI)
1014.7	1.2950	.2330E-03	66.1	.6589E-01
2014.7	1.4350	.1400E-03	113.3	.4719E-01
3014.7	1.5650	.1300E-03	165.6	.5236E-01

4014.7	1.6950	.1300E-03	226.2	.6055E-01
5014.7	1.8270	.1320E-03	288.1	.6198E-01
9014.7	2.3500	.1307E-03	531.4	.6082E-01

PRESSURE (PSI)	BW (RB/STB)	DBW/DP (RB/STB/PSI)	RSW (CF/CF)	DRSW/DP (1/PSI)
1014.7	1.0160	-.3000E-05	.0	.0000E+00
2014.7	1.0130	-.3000E-05	.0	.0000E+00
4014.7	1.0070	-.3000E-05	.0	.0000E+00
6014.7	1.0010	-.3000E-05	.0	.0000E+00
9014.7	.9920	-.3000E-05	.0	.0000E+00

PRESSURE (PSI)	BG (RCF/SCF)	DBG/DP (RCF/SCF/PSI)
264.7	.6790E-01	-.3472E-02
514.7	.3523E-01	-.1307E-03
1014.7	.1795E-01	-.3455E-04
2014.7	.9063E-02	-.8888E-05
2514.7	.7266E-02	-.3594E-05
3014.7	.6064E-02	-.2404E-05
4014.7	.4554E-02	-.1510E-05
5014.7	.3644E-02	-.9100E-06
9014.7	.2167E-02	-.3693E-06

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RUN CONTROL PARAMETERS:
     MAXIMUM NUMBER OF TIME-STEPS =  730
     FACTOR FOR INCREASING DELT =     1.000   WHEN DSMAX AND DPMAX NOT EXCEEDED.
     FACTOR FOR DECREASING DELT =     1.000   WHEN DSMAX OR DPMAX IS EXCEEDED.
     MAXIMUM SIMULATION TIME =   3650.000
     MAXIMUM RESERVOIR WOR/TIME-STEP =     95. STB/STB
     MAXIMUM RESERVOIR GOR/TIME-STEP = 500000. SCF/STB
     MINIMUM AVERAGE RESERVOIR PRESSURE/TIME-STEP =     15.
     MAXIMUM AVERAGE RESERVOIR PRESSURE/TIME-STEP =  10000.


SOLUTION METHOD IS LSORZ:
     MAXIMUM NUMBER OF ITERATIONS      (MITER) =       250
     INITIAL ACCELERATION PARAMETER    (OMEGA) =    1.7000
     MAXIMUM PRESSURE RESIDUAL           (TOL) =     .1000
     PARAMETER FOR CHANGING OMEGA       (TOL1) =     .0000

AUTOMATIC TIME STEP CRITERIA:
     MAXIMUM ALLOWED SATURATION CHANGE (DSMAX) =     .0500
     MAXIMUM ALLOWED PRESSURE CHANGE   (DPMAX) =  100.0000


IMPES FORMULATION SELECTED;  SINGLE-POINT UPSTREAM WEIGHTING.
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                                        *   WELL   UPDATE   *
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     RESERVOIR CONTAINS THE FOLLOWING RATE NODES:
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WELL	NO.	NODE	OIL(STBD)	WATER(RBD)	GAS(MCFD)	TOTAL(RBD)	BHFP(PSIA)	PID	ALIT	BLIT
P-1	1	3 3 1	.00	.00	.00	.00	1587.00	1.0580	.000E+00	.000E+00
P-1	1	3 3 2	.00	.00	.00	.00	1587.00	1.0440	.000E+00	.000E+00
P-1	1	3 3 3	.00	.00	.00	.00	1587.00	2.9330	.000E+00	.000E+00
P-1	1	3 3 4	.00	.00	.00	.00	1587.00	1.4940	.000E+00	.000E+00
P-1	1	3 3 5	.00	.00	.00	.00	1587.00	1.8670	.000E+00	.000E+00
P-1	1	3 3 6	.00	.00	.00	.00	1587.00	1.1130	.000E+00	.000E+00
P-1	1	3 3 7	.00	.00	.00	.00	1587.00	1.9700	.000E+00	.000E+00
P-2A	2	10 2 1	.00	.00	.00	.00	1587.00	1.0560	.000E+00	.000E+00
P-2A	2	10 2 2	.00	.00	.00	.00	1587.00	1.0430	.000E+00	.000E+00
P-2A	2	10 2 3	.00	.00	.00	.00	1587.00	2.8640	.000E+00	.000E+00
P-2A	2	10 2 4	.00	.00	.00	.00	1587.00	1.4760	.000E+00	.000E+00
P-2A	2	10 2 5	.00	.00	.00	.00	1587.00	1.8370	.000E+00	.000E+00
P-2A	2	10 2 6	.00	.00	.00	.00	1587.00	1.1090	.000E+00	.000E+00
P-2A	2	10 2 7	.00	.00	.00	.00	1587.00	1.9360	.000E+00	.000E+00
P-4	3	9 8 1	.00	.00	.00	.00	1587.00	1.0560	.000E+00	.000E+00
P-4	3	9 8 2	.00	.00	.00	.00	1587.00	1.0430	.000E+00	.000E+00
P-4	3	9 8 3	.00	.00	.00	.00	1587.00	2.8640	.000E+00	.000E+00
P-4	3	9 8 4	.00	.00	.00	.00	1587.00	1.4760	.000E+00	.000E+00
P-4	3	9 8 5	.00	.00	.00	.00	1587.00	1.8370	.000E+00	.000E+00
P-4	3	9 8 6	.00	.00	.00	.00	1587.00	1.1090	.000E+00	.000E+00
P-4	3	9 8 7	.00	.00	.00	.00	1587.00	1.9360	.000E+00	.000E+00
P-3	4	3 8 1	.00	.00	.00	.00	1587.00	1.1160	.000E+00	.000E+00
P-3	4	3 8 2	.00	.00	.00	.00	1587.00	1.0880	.000E+00	.000E+00

P-3	4	3	8	3	.00	.00	.00	.00	1587.00	4.8860	.000E+00	.000E+00
P-3	4	3	8	4	.00	.00	.00	.00	1587.00	1.9920	.000E+00	.000E+00
P-3	4	3	8	5	.00	.00	.00	.00	1587.00	2.7740	.000E+00	.000E+00
P-3	4	3	8	6	.00	.00	.00	.00	1587.00	1.2280	.000E+00	.000E+00
P-3	4	3	8	7	.00	.00	.00	.00	1587.00	2.9500	.000E+00	.000E+00
P-5	5	6	5	1	.00	.00	.00	.00	1587.00	1.1200	.000E+00	.000E+00
P-5	5	6	5	2	.00	.00	.00	.00	1587.00	1.0900	.000E+00	.000E+00
P-5	5	6	5	3	.00	.00	.00	.00	1587.00	4.9620	.000E+00	.000E+00
P-5	5	6	5	4	.00	.00	.00	.00	1587.00	2.0120	.000E+00	.000E+00
P-5	5	6	5	5	.00	.00	.00	.00	1587.00	2.7780	.000E+00	.000E+00
P-5	5	6	5	6	.00	.00	.00	.00	1587.00	1.2320	.000E+00	.000E+00
P-5	5	6	5	7	.00	.00	.00	.00	1587.00	2.9900	.000E+00	.000E+00
I-70	6	2	9	1	.00	-388.80	.00	.00	1587.00	1.1180	.000E+00	.000E+00
I-70	6	2	9	2	.00	-388.80	.00	.00	1587.00	1.0900	.000E+00	.000E+00
I-70	6	2	9	3	.00	-388.80	.00	.00	1587.00	4.9020	.000E+00	.000E+00
I-70	6	2	9	4	.00	-388.80	.00	.00	1587.00	2.9960	.000E+00	.000E+00
I-70	6	2	9	5	.00	-388.80	.00	.00	1587.00	2.7520	.000E+00	.000E+00
I-70	6	2	9	6	.00	-388.80	.00	.00	1587.00	1.2280	.000E+00	.000E+00
I-70	6	2	9	7	.00	-388.80	.00	.00	1587.00	2.9580	.000E+00	.000E+00
I-71	7	6	1	1	.00	-388.80	.00	.00	1587.00	1.1320	.000E+00	.000E+00
I-71	7	6	1	2	.00	-388.80	.00	.00	1587.00	1.1000	.000E+00	.000E+00
I-71	7	6	1	3	.00	-388.80	.00	.00	1587.00	5.3900	.000E+00	.000E+00
I-71	7	6	1	4	.00	-388.80	.00	.00	1587.00	2.1220	.000E+00	.000E+00
I-71	7	6	1	5	.00	-388.80	.00	.00	1587.00	2.9700	.000E+00	.000E+00
I-71	7	6	1	6	.00	-388.80	.00	.00	1587.00	1.2560	.000E+00	.000E+00
I-71	7	6	1	7	.00	-388.80	.00	.00	1587.00	3.2040	.000E+00	.000E+00
I-72	8	11	1	1	.00	-388.80	.00	.00	1587.00	1.1420	.000E+00	.000E+00
I-72	8	11	1	2	.00	-388.80	.00	.00	1587.00	1.1080	.000E+00	.000E+00
I-72	8	11	1	3	.00	-388.80	.00	.00	1587.00	5.7520	.000E+00	.000E+00
I-72	8	11	1	4	.00	-388.80	.00	.00	1587.00	2.2140	.000E+00	.000E+00
I-72	8	11	1	5	.00	-388.80	.00	.00	1587.00	3.1320	.000E+00	.000E+00
I-72	8	11	1	6	.00	-388.80	.00	.00	1587.00	1.2780	.000E+00	.000E+00
I-72	8	11	1	7	.00	-388.80	.00	.00	1587.00	3.3840	.000E+00	.000E+00
I-75	9	2	5	1	.00	-388.80	.00	.00	1587.00	1.1180	.000E+00	.000E+00
I-75	9	2	5	2	.00	-388.80	.00	.00	1587.00	1.0900	.000E+00	.000E+00
I-75	9	2	5	3	.00	-388.80	.00	.00	1587.00	4.9020	.000E+00	.000E+00
I-75	9	2	5	4	.00	-388.80	.00	.00	1587.00	1.9960	.000E+00	.000E+00
I-75	9	2	5	5	.00	-388.80	.00	.00	1587.00	2.7520	.000E+00	.000E+00
I-75	9	2	5	6	.00	-388.80	.00	.00	1587.00	1.2240	.000E+00	.000E+00
I-75	9	2	5	7	.00	-388.80	.00	.00	1587.00	2.9580	.000E+00	.000E+00
I-76	10	1	2	1	.00	-388.80	.00	.00	1587.00	1.1240	.000E+00	.000E+00
I-76	10	1	2	2	.00	-388.80	.00	.00	1587.00	1.0960	.000E+00	.000E+00
I-76	10	1	2	3	.00	-388.80	.00	.00	1587.00	5.1560	.000E+00	.000E+00
I-76	10	1	2	4	.00	-388.80	.00	.00	1587.00	2.0620	.000E+00	.000E+00
I-76	10	1	2	5	.00	-388.80	.00	.00	1587.00	2.8640	.000E+00	.000E+00
I-76	10	1	2	6	.00	-388.80	.00	.00	1587.00	1.2440	.000E+00	.000E+00
I-76	10	1	2	7	.00	-388.80	.00	.00	1587.00	3.0860	.000E+00	.000E+00
I-104	11	11	5	1	.00	-388.80	.00	.00	1587.00	1.1240	.000E+00	.000E+00
I-104	11	11	5	2	.00	-388.80	.00	.00	1587.00	1.0960	.000E+00	.000E+00
I-104	11	11	5	3	.00	-388.80	.00	.00	1587.00	5.1560	.000E+00	.000E+00
I-104	11	11	5	4	.00	-388.80	.00	.00	1587.00	2.0620	.000E+00	.000E+00
I-104	11	11	5	5	.00	-388.80	.00	.00	1587.00	2.8640	.000E+00	.000E+00
I-104	11	11	5	6	.00	-388.80	.00	.00	1587.00	1.2440	.000E+00	.000E+00
I-104	11	11	5	7	.00	-388.80	.00	.00	1587.00	3.0860	.000E+00	.000E+00
I-204	12	11	1	1	.00	-388.80	.00	.00	1587.00	1.1280	.000E+00	.000E+00
I-204	12	11	1	2	.00	-388.80	.00	.00	1587.00	1.0980	.000E+00	.000E+00
I-204	12	11	1	3	.00	-388.80	.00	.00	1587.00	5.2360	.000E+00	.000E+00
I-204	12	11	1	4	.00	-388.80	.00	.00	1587.00	2.0860	.000E+00	.000E+00
I-204	12	11	1	5	.00	-388.80	.00	.00	1587.00	2.9100	.000E+00	.000E+00
I-204	12	11	1	6	.00	-388.80	.00	.00	1587.00	1.2500	.000E+00	.000E+00
I-204	12	11	1	7	.00	-388.80	.00	.00	1587.00	3.1360	.000E+00	.000E+00
I-317	13	6	1	1	.00	-388.80	.00	.00	1587.00	1.1320	.000E+00	.000E+00
I-317	13	6	1	2	.00	-388.80	.00	.00	1587.00	1.1000	.000E+00	.000E+00
I-317	13	6	1	3	.00	-388.80	.00	.00	1587.00	5.3900	.000E+00	.000E+00
I-317	13	6	1	4	.00	-388.80	.00	.00	1587.00	2.1120	.000E+00	.000E+00
I-317	13	6	1	5	.00	-388.80	.00	.00	1587.00	2.9700	.000E+00	.000E+00
I-317	13	6	1	6	.00	-388.80	.00	.00	1587.00	1.2360	.000E+00	.000E+00
I-317	13	6	1	7	.00	-388.80	.00	.00	1587.00	3.2040	.000E+00	.000E+00
P-6	14	9	5	1	.00	.00	.00	.00	1587.00	1.1140	.000E+00	.000E+00
P-6	14	9	5	2	.00	.00	.00	.00	1587.00	1.0860	.000E+00	.000E+00
P-6	14	9	5	3	.00	.00	.00	.00	1587.00	4.7700	.000E+00	.000E+00
P-6	14	9	5	4	.00	.00	.00	.00	1587.00	1.9640	.000E+00	.000E+00
P-6	14	9	5	5	.00	.00	.00	.00	1587.00	2.6920	.000E+00	.000E+00
P-6	14	9	5	6	.00	.00	.00	.00	1587.00	1.2200	.000E+00	.000E+00
P-6	14	9	5	7	.00	.00	.00	.00	1587.00	2.8920	.000E+00	.000E+00
P-7	15	5	8	1	.00	.00	.00	.00	1587.00	1.1120	.000E+00	.000E+00
P-7	15	5	8	2	.00	.00	.00	.00	1587.00	1.0860	.000E+00	.000E+00
P-7	15	5	8	3	.00	.00	.00	.00	1587.00	4.7480	.000E+00	.000E+00
P-7	15	5	8	4	.00	.00	.00	.00	1587.00	1.9580	.000E+00	.000E+00
P-7	15	5	8	5	.00	.00	.00	.00	1587.00	2.6820	.000E+00	.000E+00
P-7	15	5	8	6	.00	.00	.00	.00	1587.00	1.2200	.000E+00	.000E+00
P-7	15	5	8	7	.00	.00	.00	.00	1587.00	2.8800	.000E+00	.000E+00
P-8	16	4	5	1	.00	.00	.00	.00	1587.00	1.1140	.000E+00	.000E+00

P-8	16	4	5	2	.00	.00	.00	.00	1587.00	1.0860	.000E+00	.000E+00
P-8	16	4	5	3	.00	.00	.00	.00	1587.00	4.7700	.000E+00	.000E+00
P-8	16	4	5	4	.00	.00	.00	.00	1587.00	1.9640	.000E+00	.000E+00
P-8	16	4	5	5	.00	.00	.00	.00	1587.00	2.6920	.000E+00	.000E+00
P-8	16	4	5	6	.00	.00	.00	.00	1587.00	1.2200	.000E+00	.000E+00
P-8	16	4	5	7	.00	.00	.00	.00	1587.00	2.8920	.000E+00	.000E+00
I-9	17	6	7	1	.00	-388.80	.00	.00	1587.00	1.1200	.000E+00	.000E+00
I-9	17	6	7	2	.00	-388.80	.00	.00	1587.00	1.0900	.000E+00	.000E+00
I-9	17	6	7	3	.00	-388.80	.00	.00	1587.00	4.9620	.000E+00	.000E+00
I-9	17	6	7	4	.00	-388.80	.00	.00	1587.00	2.0120	.000E+00	.000E+00
I-9	17	6	7	5	.00	-388.80	.00	.00	1587.00	2.7780	.000E+00	.000E+00
I-9	17	6	7	6	.00	-388.80	.00	.00	1587.00	1.2280	.000E+00	.000E+00
I-9	17	6	7	7	.00	-388.80	.00	.00	1587.00	2.9900	.000E+00	.000E+00
I-10	18	8	4	1	.00	-388.80	.00	.00	1587.00	1.1140	.000E+00	.000E+00
I-10	18	8	4	2	.00	-388.80	.00	.00	1587.00	1.0860	.000E+00	.000E+00
I-10	18	8	4	3	.00	-388.80	.00	.00	1587.00	4.7700	.000E+00	.000E+00
I-10	18	8	4	4	.00	-388.80	.00	.00	1587.00	1.9640	.000E+00	.000E+00
I-10	18	8	4	5	.00	-388.80	.00	.00	1587.00	2.6920	.000E+00	.000E+00
I-10	18	8	4	6	.00	-388.80	.00	.00	1587.00	1.2200	.000E+00	.000E+00
I-10	18	8	4	7	.00	-388.80	.00	.00	1587.00	2.8920	.000E+00	.000E+00
I-11	19	5	4	1	.00	-388.80	.00	.00	1587.00	1.1120	.000E+00	.000E+00
I-11	19	5	4	2	.00	-388.80	.00	.00	1587.00	1.0840	.000E+00	.000E+00
I-11	19	5	4	3	.00	-388.80	.00	.00	1587.00	4.7100	.000E+00	.000E+00
I-11	19	5	4	4	.00	-388.80	.00	.00	1587.00	1.9480	.000E+00	.000E+00
I-11	19	5	4	5	.00	-388.80	.00	.00	1587.00	2.6660	.000E+00	.000E+00
I-11	19	5	4	6	.00	-388.80	.00	.00	1587.00	1.2180	.000E+00	.000E+00
I-11	19	5	4	7	.00	-388.80	.00	.00	1587.00	2.8620	.000E+00	.000E+00
I-12R	20	8	7	1	.00	-388.80	.00	.00	1587.00	1.1160	.000E+00	.000E+00
I-12R	20	8	7	2	.00	-388.80	.00	.00	1587.00	1.0880	.000E+00	.000E+00
I-12R	20	8	7	3	.00	-388.80	.00	.00	1587.00	4.8520	.000E+00	.000E+00
I-12R	20	8	7	4	.00	-388.80	.00	.00	1587.00	1.9840	.000E+00	.000E+00
I-12R	20	8	7	5	.00	-388.80	.00	.00	1587.00	2.7280	.000E+00	.000E+00
I-12R	20	8	7	6	.00	-388.80	.00	.00	1587.00	1.2260	.000E+00	.000E+00
I-12R	20	8	7	7	.00	-388.80	.00	.00	1587.00	2.9340	.000E+00	.000E+00
P-13	21	6	3	1	.00	.00	.00	.00	1587.00	1.0590	.000E+00	.000E+00
P-13	21	6	3	2	.00	.00	.00	.00	1587.00	1.0440	.000E+00	.000E+00
P-13	21	6	3	3	.00	.00	.00	.00	1587.00	3.9290	.000E+00	.000E+00
P-13	21	6	3	4	.00	.00	.00	.00	1587.00	1.4930	.000E+00	.000E+00
P-13	21	6	3	5	.00	.00	.00	.00	1587.00	1.8660	.000E+00	.000E+00
P-13	21	6	3	6	.00	.00	.00	.00	1587.00	1.1130	.000E+00	.000E+00
P-13	21	6	3	7	.00	.00	.00	.00	1587.00	1.9680	.000E+00	.000E+00
I-329	22	4	1	1	.00	-388.80	.00	.00	1587.00	1.1240	.000E+00	.000E+00
I-329	22	4	1	2	.00	-388.80	.00	.00	1587.00	1.0960	.000E+00	.000E+00
I-329	22	4	1	3	.00	-388.80	.00	.00	1587.00	5.1560	.000E+00	.000E+00
I-329	22	4	1	4	.00	-388.80	.00	.00	1587.00	2.0620	.000E+00	.000E+00
I-329	22	4	1	5	.00	-388.80	.00	.00	1587.00	2.8640	.000E+00	.000E+00
I-329	22	4	1	6	.00	-388.80	.00	.00	1587.00	1.2440	.000E+00	.000E+00
I-329	22	4	1	7	.00	-388.80	.00	.00	1587.00	3.0860	.000E+00	.000E+00
I-330	23	9	1	1	.00	-388.80	.00	.00	1587.00	1.1240	.000E+00	.000E+00
I-330	23	9	1	2	.00	-388.80	.00	.00	1587.00	1.0960	.000E+00	.000E+00
I-330	23	9	1	3	.00	-388.80	.00	.00	1587.00	5.1560	.000E+00	.000E+00
I-330	23	9	1	4	.00	-388.80	.00	.00	1587.00	2.0620	.000E+00	.000E+00
I-330	23	9	1	5	.00	-388.80	.00	.00	1587.00	2.8640	.000E+00	.000E+00
I-330	23	9	1	6	.00	-388.80	.00	.00	1587.00	1.2440	.000E+00	.000E+00
I-330	23	9	1	7	.00	-388.80	.00	.00	1587.00	3.0860	.000E+00	.000E+00
I-14	24	4	7	1	.00	-388.80	.00	.00	1587.00	1.1140	.000E+00	.000E+00
I-14	24	4	7	2	.00	-388.80	.00	.00	1587.00	1.0860	.000E+00	.000E+00
I-14	24	4	7	3	.00	-388.80	.00	.00	1587.00	4.7900	.000E+00	.000E+00
I-14	24	4	7	4	.00	-388.80	.00	.00	1587.00	1.9680	.000E+00	.000E+00
I-14	24	4	7	5	.00	-388.80	.00	.00	1587.00	2.7000	.000E+00	.000E+00
I-14	24	4	7	6	.00	-388.80	.00	.00	1587.00	1.2220	.000E+00	.000E+00
I-14	24	4	7	7	.00	-388.80	.00	.00	1587.00	2.9020	.000E+00	.000E+00
P-15	25	4	2	1	.00	.00	.00	.00	1587.00	1.1120	.000E+00	.000E+00
P-15	25	4	2	2	.00	.00	.00	.00	1587.00	1.0860	.000E+00	.000E+00
P-15	25	4	2	3	.00	.00	.00	.00	1587.00	4.7280	.000E+00	.000E+00
P-15	25	4	2	4	.00	.00	.00	.00	1587.00	1.9520	.000E+00	.000E+00
P-15	25	4	2	5	.00	.00	.00	.00	1587.00	2.6740	.000E+00	.000E+00
P-15	25	4	2	6	.00	.00	.00	.00	1587.00	1.2180	.000E+00	.000E+00
P-15	25	4	2	7	.00	.00	.00	.00	1587.00	2.8720	.000E+00	.000E+00
P-16	26	8	2	1	.00	.00	.00	.00	1587.00	1.1140	.000E+00	.000E+00
P-16	26	8	2	2	.00	.00	.00	.00	1587.00	1.0860	.000E+00	.000E+00
P-16	26	8	2	3	.00	.00	.00	.00	1587.00	4.7700	.000E+00	.000E+00
P-16	26	8	2	4	.00	.00	.00	.00	1587.00	1.9640	.000E+00	.000E+00
P-16	26	8	2	5	.00	.00	.00	.00	1587.00	2.6920	.000E+00	.000E+00
P-16	26	8	2	6	.00	.00	.00	.00	1587.00	1.2200	.000E+00	.000E+00
P-16	26	8	2	7	.00	.00	.00	.00	1587.00	2.8920	.000E+00	.000E+00
I-17	27	3	4	1	.00	-388.80	.00	.00	1587.00	1.1160	.000E+00	.000E+00
I-17	27	3	4	2	.00	-388.80	.00	.00	1587.00	1.0880	.000E+00	.000E+00
I-17	27	3	4	3	.00	-388.80	.00	.00	1587.00	4.8460	.000E+00	.000E+00
I-17	27	3	4	4	.00	-388.80	.00	.00	1587.00	1.9820	.000E+00	.000E+00
I-17	27	3	4	5	.00	-388.80	.00	.00	1587.00	2.7260	.000E+00	.000E+00
I-17	27	3	4	6	.00	-388.80	.00	.00	1587.00	1.2260	.000E+00	.000E+00
I-17	27	3	4	7	.00	-388.80	.00	.00	1587.00	2.9300	.000E+00	.000E+00

P-18	28	10	6	1	.00	.00	.00	.00	1587.00	1.1140	.000E+00	.000E+00
P-18	28	10	6	2	.00	.00	.00	.00	1587.00	1.0880	.000E+00	.000E+00
P-18	28	10	6	3	.00	.00	.00	.00	1587.00	4.8080	.000E+00	.000E+00
P-18	28	10	6	4	.00	.00	.00	.00	1587.00	1.9720	.000E+00	.000E+00
P-18	28	10	6	5	.00	.00	.00	.00	1587.00	2.7080	.000E+00	.000E+00
P-18	28	10	6	6	.00	.00	.00	.00	1587.00	1.2220	.000E+00	.000E+00
P-18	28	10	6	7	.00	.00	.00	.00	1587.00	2.9120	.000E+00	.000E+00

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BLOCK  3  3  1 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    1
BLOCK  3  3  2 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    1
BLOCK  3  3  3 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    1
BLOCK  3  3  4 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    1
BLOCK  3  3  5 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    1
BLOCK  3  3  6 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    1
BLOCK  3  3  7 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    1
BLOCK 10  2  1 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    2
BLOCK 10  2  2 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    2
BLOCK 10  2  3 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    2
BLOCK 10  2  4 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    2
BLOCK 10  2  5 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    2
BLOCK 10  2  6 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    2
BLOCK 10  2  7 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    2
BLOCK  9  8  1 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    3
BLOCK  9  8  2 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    3
BLOCK  9  8  3 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    3
BLOCK  9  8  4 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    3
BLOCK  9  8  5 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    3
BLOCK  9  8  6 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    3
BLOCK  9  8  7 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    3
BLOCK  3  8  1 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    4
BLOCK  3  8  2 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    4
BLOCK  3  8  3 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    4
BLOCK  3  8  4 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    4
BLOCK  3  8  5 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    4
BLOCK  3  8  6 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    4
BLOCK  3  8  7 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    4
BLOCK  6  5  1 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    5
BLOCK  6  5  2 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    5
BLOCK  6  5  3 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    5
BLOCK  6  5  4 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    5
BLOCK  6  5  5 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    5
BLOCK  6  5  6 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    5
BLOCK  6  5  7 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    5
BLOCK  2  9  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    6
BLOCK  2  9  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    6
BLOCK  2  9  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    6
BLOCK  2  9  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    6
BLOCK  2  9  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    6
BLOCK  2  9  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    6
BLOCK  2  9  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    6
BLOCK  6  1  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    7
BLOCK  6  1  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    7
BLOCK  6  1  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    7
BLOCK  6  1  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    7
BLOCK  6  1  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    7
BLOCK  6  1  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    7
BLOCK  6  1  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    7
BLOCK 11  1  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    8
BLOCK 11  1  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    8
BLOCK 11  1  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    8
BLOCK 11  1  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    8
BLOCK 11  1  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    8
BLOCK 11  1  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    8
BLOCK 11  1  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    8
BLOCK  2  5  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    9
BLOCK  2  5  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    9
BLOCK  2  5  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    9
BLOCK  2  5  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    9
BLOCK  2  5  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    9
BLOCK  2  5  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    9
BLOCK  2  5  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    9
BLOCK  1  2  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER   10
BLOCK  1  2  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER   10
BLOCK  1  2  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER   10
BLOCK  1  2  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER   10
BLOCK  1  2  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER   10
BLOCK  1  2  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER   10
BLOCK  1  2  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER   10
BLOCK 11  5  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER   11
BLOCK 11  5  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER   11
BLOCK 11  5  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER   11
BLOCK 11  5  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER   11
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BLOCK  11  5  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    11
BLOCK  11  5  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    11
BLOCK  11  5  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    11
BLOCK  11  1  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    12
BLOCK  11  1  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    12
BLOCK  11  1  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    12
BLOCK  11  1  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    12
BLOCK  11  1  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    12
BLOCK  11  1  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    12
BLOCK  11  1  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    12
BLOCK   6  1  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    13
BLOCK   6  1  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    13
BLOCK   6  1  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    13
BLOCK   6  1  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    13
BLOCK   6  1  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    13
BLOCK   6  1  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    13
BLOCK   6  1  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    13
BLOCK   9  5  1 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    14
BLOCK   9  5  2 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    14
BLOCK   9  5  3 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    14
BLOCK   9  5  4 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    14
BLOCK   9  5  5 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    14
BLOCK   9  5  6 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    14
BLOCK   9  5  7 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    14
BLOCK   5  8  1 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    15
BLOCK   5  8  2 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    15
BLOCK   5  8  3 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    15
BLOCK   5  8  4 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    15
BLOCK   5  8  5 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    15
BLOCK   5  8  6 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    15
BLOCK   5  8  7 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    15
BLOCK   4  5  1 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    16
BLOCK   4  5  2 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    16
BLOCK   4  5  3 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    16
BLOCK   4  5  4 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    16
BLOCK   4  5  5 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    16
BLOCK   4  5  6 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    16
BLOCK   4  5  7 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    16
BLOCK   6  7  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    17
BLOCK   6  7  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    17
BLOCK   6  7  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    17
BLOCK   6  7  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    17
BLOCK   6  7  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    17
BLOCK   6  7  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    17
BLOCK   6  7  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    17
BLOCK   8  4  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    18
BLOCK   8  4  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    18
BLOCK   8  4  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    18
BLOCK   8  4  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    18
BLOCK   8  4  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    18
BLOCK   8  4  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    18
BLOCK   8  4  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    18
BLOCK   5  4  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    19
BLOCK   5  4  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    19
BLOCK   5  4  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    19
BLOCK   5  4  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    19
BLOCK   5  4  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    19
BLOCK   5  4  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    19
BLOCK   5  4  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    19
BLOCK   8  7  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    20
BLOCK   8  7  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    20
BLOCK   8  7  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    20
BLOCK   8  7  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    20
BLOCK   8  7  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    20
BLOCK   8  7  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    20
BLOCK   8  7  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    20
BLOCK   6  3  1 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    21
BLOCK   6  3  2 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    21
BLOCK   6  3  3 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    21
BLOCK   6  3  4 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    21
BLOCK   6  3  5 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    21
BLOCK   6  3  6 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    21
BLOCK   6  3  7 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    21
BLOCK   4  1  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    22
BLOCK   4  1  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    22
BLOCK   4  1  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    22
BLOCK   4  1  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    22
BLOCK   4  1  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    22
BLOCK   4  1  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    22
BLOCK   4  1  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    22
BLOCK   9  1  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    23
BLOCK   9  1  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    23
BLOCK   9  1  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    23
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BLOCK   9  1  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    23
BLOCK   9  1  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    23
BLOCK   9  1  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    23
BLOCK   9  1  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    23
BLOCK   4  7  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    24
BLOCK   4  7  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    24
BLOCK   4  7  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    24
BLOCK   4  7  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    24
BLOCK   4  7  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    24
BLOCK   4  7  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    24
BLOCK   4  7  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    24
BLOCK   4  2  1 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    25
BLOCK   4  2  2 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    25
BLOCK   4  2  3 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    25
BLOCK   4  2  4 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    25
BLOCK   4  2  5 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    25
BLOCK   4  2  6 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    25
BLOCK   4  2  7 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    25
BLOCK   8  2  1 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    26
BLOCK   8  2  2 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    26
BLOCK   8  2  3 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    26
BLOCK   8  2  4 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    26
BLOCK   8  2  5 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    26
BLOCK   8  2  6 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    26
BLOCK   8  2  7 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    26
BLOCK   3  4  1 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    27
BLOCK   3  4  2 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    27
BLOCK   3  4  3 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    27
BLOCK   3  4  4 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    27
BLOCK   3  4  5 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    27
BLOCK   3  4  6 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    27
BLOCK   3  4  7 CONTAINS THE RATE SPECIFIED WATER INJECTION WELL NUMBER    27
BLOCK  10  6  1 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    28
BLOCK  10  6  2 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    28
BLOCK  10  6  3 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    28
BLOCK  10  6  4 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    28
BLOCK  10  6  5 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    28
BLOCK  10  6  6 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    28
BLOCK  10  6  7 CONTAINS THE EXPLICIT PRESSURE SPECIFIED PRODUCING WELL NUMBER    28
1
******* INITIAL FLUID VOLUMES *******


LAYER  1 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                    1.2855
     WATER IN PLACE (MILLION STB)                   .3827
     SOLUTION GAS IN PLACE (BILLION SCF)            .6483
     FREE GAS IN PLACE (BILLION SCF)                .0970


LAYER  2 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                     .7128
     WATER IN PLACE (MILLION STB)                   .2491
     SOLUTION GAS IN PLACE (BILLION SCF)            .3617
     FREE GAS IN PLACE (BILLION SCF)                .0515


LAYER  3 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                   13.8482
     WATER IN PLACE (MILLION STB)                  6.7757
     SOLUTION GAS IN PLACE (BILLION SCF)           7.1533
     FREE GAS IN PLACE (BILLION SCF)                .9276


LAYER  4 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                    1.5500
     WATER IN PLACE (MILLION STB)                  1.2463
     SOLUTION GAS IN PLACE (BILLION SCF)            .8158
     FREE GAS IN PLACE (BILLION SCF)                .0950


LAYER  5 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                    4.6393
     WATER IN PLACE (MILLION STB)                  2.6835
     SOLUTION GAS IN PLACE (BILLION SCF)           2.4593
     FREE GAS IN PLACE (BILLION SCF)                .2499


LAYER  6 INITIAL FLUID VOLUMES:
     OIL IN PLACE (MILLION STB)                     .9987
     WATER IN PLACE (MILLION STB)                   .6742
     SOLUTION GAS IN PLACE (BILLION SCF)            .5327
     FREE GAS IN PLACE (BILLION SCF)                .0512
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LAYER 7 INITIAL FLUID VOLUMES:

OIL IN PLACE (MILLION STB)	4.4346
WATER IN PLACE (MILLION STB)	3.3360
SOLUTION GAS IN PLACE (BILLION SCF)	2.3853
FREE GAS IN PLACE (BILLION SCF)	.2041

TOTAL INITIAL FLUID VOLUMES IN RESERVOIR:

OIL IN PLACE (MILLION STB)	27.4690
WATER IN PLACE (MILLION STB)	15.3475
SOLUTION GAS IN PLACE (BILLION SCF)	14.3564
FREE GAS IN PLACE (BILLION SCF)	1.6763

1

******* INITIAL ARRAYS *******

***** RESERVOIR PRESSURE DISTRIBUTION *****

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	1504.	1500.	1486.	1468.	1446.	1445.	1451.	1467.	1513.	1520.	1547.
2	1495.	1492.	1477.	1447.	1439.	1420.	1437.	1455.	1503.	1501.	1524.
3	1496.	1491.	1464.	1457.	1386.	1038.	1340.	1454.	1508.	1528.	1533.
4	1510.	1508.	1503.	1486.	1473.	1424.	1461.	1504.	1524.	1541.	1544.
5	1525.	1524.	1515.	1492.	1495.	1479.	1502.	1520.	1517.	1547.	1554.
6	1537.	1536.	1533.	1528.	1527.	1529.	1535.	1543.	1548.	1539.	1552.
7	1550.	1549.	1548.	1555.	1546.	1556.	1558.	1565.	1565.	1568.	1569.
8	1562.	1560.	1553.	1558.	1549.	1563.	1568.	1572.	1564.	1578.	1579.
9	1570.	1570.	1569.	1568.	1569.	1572.	1574.	1579.	1582.	1585.	1585.
10	1571.	1570.	1571.	1570.	1571.	1574.	1575.	1580.	1585.	1586.	1587.

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	1515.	1510.	1497.	1479.	1457.	1458.	1462.	1479.	1524.	1533.	1559.
2	1506.	1502.	1488.	1459.	1450.	1435.	1449.	1467.	1514.	1515.	1537.
3	1506.	1502.	1476.	1468.	1404.	1091.	1366.	1467.	1518.	1539.	1543.
4	1520.	1518.	1513.	1496.	1484.	1441.	1476.	1514.	1534.	1551.	1555.
5	1535.	1534.	1525.	1504.	1506.	1491.	1513.	1530.	1530.	1558.	1567.
6	1547.	1547.	1543.	1539.	1538.	1540.	1546.	1554.	1559.	1551.	1563.
7	1560.	1559.	1558.	1564.	1556.	1566.	1569.	1576.	1576.	1579.	1580.
8	1572.	1571.	1564.	1568.	1560.	1574.	1578.	1583.	1575.	1588.	1590.
9	1580.	1580.	1580.	1579.	1579.	1582.	1584.	1589.	1593.	1595.	1596.
10	1581.	1581.	1581.	1580.	1582.	1584.	1585.	1590.	1595.	1597.	1597.

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	1547.	1542.	1528.	1504.	1489.	1487.	1496.	1516.	1552.	1569.	1580.
2	1537.	1533.	1521.	1500.	1483.	1476.	1488.	1511.	1547.	1563.	1573.
3	1536.	1533.	1519.	1501.	1458.	1367.	1448.	1504.	1549.	1569.	1573.
4	1548.	1546.	1539.	1526.	1511.	1490.	1515.	1542.	1563.	1580.	1584.
5	1563.	1562.	1555.	1542.	1538.	1537.	1548.	1562.	1574.	1591.	1597.
6	1575.	1574.	1571.	1568.	1567.	1571.	1576.	1583.	1590.	1592.	1597.
7	1587.	1587.	1586.	1588.	1585.	1596.	1598.	1605.	1606.	1608.	1609.
8	1600.	1599.	1596.	1597.	1597.	1604.	1606.	1612.	1614.	1617.	1618.
9	1607.	1608.	1608.	1606.	1608.	1610.	1612.	1617.	1622.	1623.	1623.
10	1608.	1608.	1609.	1608.	1610.	1611.	1613.	1618.	1623.	1624.	1624.

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	1588.	1583.	1568.	1544.	1530.	1530.	1537.	1559.	1592.	1603.	1619.
2	1578.	1574.	1561.	1539.	1524.	1516.	1529.	1551.	1587.	1598.	1607.
3	1575.	1571.	1555.	1540.	1498.	1385.	1488.	1548.	1587.	1606.	1610.
4	1585.	1584.	1576.	1563.	1551.	1533.	1557.	1581.	1601.	1618.	1621.
5	1598.	1598.	1592.	1578.	1575.	1577.	1588.	1601.	1610.	1628.	1635.
6	1609.	1608.	1606.	1604.	1604.	1612.	1616.	1624.	1628.	1627.	1632.
7	1620.	1620.	1619.	1624.	1622.	1634.	1637.	1643.	1642.	1643.	1643.
8	1632.	1632.	1628.	1630.	1629.	1637.	1640.	1646.	1646.	1650.	1650.

9	1640.	1640.	1641.	1639.	1640.	1643.	1644.	1649.	1654.	1655.	1655.
10	1641.	1641.	1641.	1640.	1642.	1644.	1645.	1650.	1655.	1656.	1656.

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	1603.	1598.	1583.	1559.	1546.	1546.	1554.	1574.	1607.	1619.	1632.
2	1593.	1589.	1575.	1555.	1540.	1535.	1546.	1567.	1602.	1614.	1623.
3	1590.	1586.	1570.	1556.	1516.	1417.	1507.	1564.	1603.	1621.	1624.
4	1599.	1598.	1590.	1578.	1567.	1550.	1573.	1597.	1616.	1633.	1637.
5	1613.	1613.	1606.	1592.	1590.	1592.	1603.	1616.	1625.	1643.	1649.
6	1622.	1622.	1620.	1618.	1618.	1626.	1630.	1638.	1642.	1642.	1647.
7	1633.	1633.	1632.	1637.	1636.	1649.	1651.	1657.	1656.	1657.	1657.
8	1645.	1645.	1641.	1643.	1643.	1651.	1654.	1659.	1660.	1663.	1663.
9	1653.	1653.	1653.	1651.	1653.	1656.	1657.	1662.	1667.	1668.	1668.
10	1653.	1653.	1654.	1652.	1654.	1656.	1658.	1663.	1668.	1669.	1669.

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	1616.	1611.	1596.	1574.	1560.	1562.	1568.	1588.	1622.	1632.	1649.
2	1607.	1602.	1588.	1567.	1554.	1548.	1560.	1579.	1615.	1625.	1636.
3	1603.	1599.	1581.	1569.	1531.	1397.	1521.	1579.	1615.	1634.	1637.
4	1612.	1611.	1603.	1590.	1581.	1565.	1588.	1612.	1628.	1645.	1650.
5	1625.	1625.	1619.	1604.	1603.	1604.	1616.	1629.	1636.	1656.	1663.
6	1634.	1633.	1631.	1630.	1631.	1639.	1643.	1651.	1654.	1653.	1659.
7	1644.	1644.	1644.	1650.	1648.	1662.	1663.	1670.	1668.	1668.	1669.
8	1656.	1656.	1652.	1654.	1653.	1662.	1665.	1671.	1670.	1674.	1675.
9	1664.	1664.	1664.	1662.	1664.	1667.	1668.	1673.	1678.	1679.	1679.
10	1664.	1664.	1665.	1663.	1665.	1667.	1669.	1674.	1679.	1680.	1680.

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	1633.	1628.	1613.	1590.	1578.	1578.	1586.	1607.	1638.	1649.	1662.
2	1623.	1619.	1606.	1586.	1573.	1568.	1579.	1600.	1633.	1645.	1654.
3	1620.	1616.	1601.	1587.	1554.	1471.	1549.	1598.	1633.	1651.	1654.
4	1628.	1627.	1619.	1607.	1598.	1586.	1607.	1628.	1646.	1662.	1666.
5	1641.	1641.	1635.	1622.	1620.	1623.	1634.	1646.	1655.	1673.	1679.
6	1649.	1649.	1647.	1646.	1647.	1655.	1660.	1667.	1671.	1671.	1677.
7	1659.	1659.	1659.	1664.	1664.	1677.	1679.	1685.	1684.	1685.	1685.
8	1671.	1671.	1668.	1669.	1670.	1678.	1681.	1687.	1688.	1690.	1690.
9	1678.	1679.	1679.	1677.	1679.	1682.	1683.	1688.	1693.	1694.	1694.
10	1679.	1679.	1680.	1678.	1680.	1682.	1684.	1688.	1694.	1694.	1694.

********* OIL SATURATION *********

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	.693	.769	.770	.514	.682	.003	.676	.729	.534	.474	.001
2	.466	.736	.765	.738	.747	.550	.745	.771	.759	.659	.484
3	.755	.768	.769	.761	.697	.653	.706	.727	.776	.786	.781
4	.780	.763	.724	.767	.564	.680	.664	.554	.785	.786	.696
5	.781	.575	.753	.774	.773	.768	.777	.779	.764	.669	.164
6	.793	.789	.791	.776	.786	.724	.785	.751	.793	.785	.722
7	.799	.798	.794	.634	.773	.490	.757	.525	.783	.804	.803
8	.803	.797	.798	.801	.794	.792	.806	.797	.796	.808	.810
9	.805	.681	.799	.806	.805	.807	.808	.810	.810	.812	.812
10	.807	.806	.807	.807	.807	.808	.809	.811	.812	.813	.814

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	.634	.765	.778	.440	.661	.002	.651	.705	.453	.438	.000
2	.307	.706	.776	.720	.757	.531	.740	.775	.754	.612	.444
3	.742	.779	.777	.776	.662	.624	.666	.697	.783	.783	.773
4	.784	.755	.704	.782	.505	.635	.614	.481	.783	.780	.659
5	.777	.502	.731	.777	.784	.759	.781	.777	.742	.619	.021
6	.792	.787	.790	.768	.783	.677	.779	.718	.789	.774	.689
7	.798	.798	.792	.582	.758	.358	.729	.420	.766	.802	.801
8	.801	.793	.789	.799	.781	.785	.805	.789	.776	.806	.808
9	.804	.640	.794	.805	.803	.806	.808	.809	.806	.811	.811
10	.807	.806	.806	.806	.806	.808	.809	.810	.810	.812	.812

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	.507	.617	.650	.579	.622	.238	.621	.638	.536	.444	.000
2	.436	.633	.690	.681	.679	.537	.677	.689	.679	.593	.433
3	.658	.697	.704	.698	.649	.621	.648	.658	.707	.707	.670
4	.716	.676	.693	.708	.594	.631	.607	.583	.713	.683	.575
5	.712	.543	.661	.704	.715	.673	.703	.702	.671	.567	.268
6	.730	.721	.729	.710	.713	.624	.707	.661	.721	.716	.620
7	.736	.736	.740	.660	.708	.483	.684	.525	.710	.730	.726
8	.734	.722	.731	.747	.726	.731	.754	.731	.725	.742	.744
9	.737	.644	.713	.739	.735	.742	.757	.747	.737	.747	.747
10	.744	.749	.737	.748	.740	.745	.758	.748	.739	.748	.748

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	.282	.467	.526	.444	.526	.014	.516	.495	.328	.221	.000
2	.119	.493	.590	.599	.618	.434	.609	.607	.564	.464	.202
3	.531	.610	.646	.658	.566	.530	.551	.570	.652	.630	.557
4	.668	.567	.610	.664	.488	.519	.499	.451	.651	.567	.417
5	.641	.363	.552	.644	.668	.560	.633	.613	.571	.401	.019
6	.695	.674	.692	.649	.633	.433	.604	.505	.651	.633	.466
7	.703	.700	.705	.554	.598	.172	.554	.290	.599	.677	.662
8	.691	.651	.688	.721	.682	.659	.727	.656	.679	.708	.709
9	.677	.494	.629	.703	.696	.710	.734	.717	.697	.713	.716
10	.709	.710	.696	.720	.706	.715	.736	.718	.698	.715	.715

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	.456	.571	.615	.540	.602	.030	.597	.599	.475	.374	.000
2	.384	.596	.669	.670	.674	.503	.669	.680	.652	.548	.361
3	.620	.680	.703	.704	.626	.592	.622	.645	.708	.695	.637
4	.715	.653	.679	.711	.563	.602	.587	.550	.712	.658	.538
5	.692	.490	.632	.701	.719	.659	.703	.695	.652	.525	.215
6	.732	.714	.730	.706	.701	.577	.692	.627	.715	.694	.562
7	.738	.737	.741	.633	.676	.404	.647	.464	.683	.726	.711
8	.730	.710	.731	.752	.725	.708	.760	.709	.726	.745	.744
9	.727	.605	.693	.739	.734	.744	.763	.750	.736	.747	.749
10	.744	.747	.735	.751	.740	.746	.765	.751	.736	.748	.750

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	.419	.558	.607	.436	.545	.008	.546	.569	.369	.328	.004
2	.191	.549	.653	.643	.654	.458	.648	.666	.631	.522	.322
3	.583	.666	.695	.697	.583	.557	.582	.607	.698	.683	.619
4	.705	.630	.655	.704	.457	.560	.531	.424	.704	.644	.505
5	.660	.385	.604	.691	.714	.646	.695	.685	.634	.485	.005
6	.727	.702	.724	.692	.691	.535	.677	.592	.704	.674	.523
7	.734	.732	.734	.566	.647	.249	.603	.333	.656	.716	.697
8	.725	.703	.725	.746	.716	.683	.753	.686	.715	.738	.738
9	.718	.563	.684	.733	.727	.738	.757	.744	.729	.742	.743
10	.739	.740	.729	.746	.735	.742	.758	.745	.729	.742	.743

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	.385	.503	.542	.514	.550	.002	.539	.548	.421	.335	.000
2	.318	.548	.623	.630	.630	.456	.625	.629	.596	.499	.320
3	.564	.631	.662	.666	.584	.539	.568	.602	.657	.637	.575
4	.673	.603	.640	.672	.520	.567	.544	.504	.662	.602	.489
5	.642	.436	.581	.657	.682	.612	.657	.647	.595	.475	.166
6	.694	.670	.692	.664	.654	.533	.646	.582	.666	.638	.501
7	.701	.699	.708	.605	.633	.351	.599	.422	.638	.675	.654
8	.686	.666	.688	.721	.677	.658	.729	.658	.674	.703	.703
9	.685	.571	.643	.697	.688	.704	.735	.711	.689	.706	.708
10	.705	.713	.690	.716	.699	.709	.737	.713	.689	.707	.710

******** WATER SATURATION *********

K = 1

	1	2	3	4	5	6	7	8	9	10	11

1	.207	.120	.114	.379	.200	.995	.209	.156	.375	.457	.999
2	.459	.151	.113	.144	.120	.338	.131	.112	.127	.236	.447
3	.132	.112	.111	.110	.180	.229	.175	.156	.110	.111	.119
4	.110	.128	.164	.111	.331	.203	.227	.360	.111	.117	.219
5	.118	.345	.142	.112	.110	.118	.111	.114	.128	.249	.808
6	.110	.114	.110	.121	.112	.177	.115	.155	.111	.117	.194
7	.109	.110	.113	.282	.134	.452	.158	.416	.131	.110	.112
8	.110	.115	.110	.111	.112	.122	.109	.120	.112	.110	.110
9	.111	.245	.117	.110	.110	.110	.109	.110	.110	.110	.110
10	.110	.110	.110	.109	.110	.110	.109	.110	.110	.110	.110

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	.276	.133	.120	.459	.237	.998	.247	.194	.465	.498	1.000
2	.643	.192	.122	.175	.133	.365	.152	.121	.144	.286	.491
3	.156	.119	.121	.116	.230	.267	.227	.197	.115	.116	.130
4	.114	.143	.194	.115	.406	.259	.285	.447	.115	.127	.263
5	.126	.430	.168	.121	.114	.140	.117	.121	.156	.309	.978
6	.113	.120	.114	.132	.117	.229	.123	.193	.117	.129	.235
7	.113	.113	.118	.340	.154	.598	.192	.532	.151	.115	.117
8	.114	.121	.116	.115	.121	.132	.112	.130	.123	.114	.113
9	.115	.292	.125	.113	.114	.113	.112	.113	.115	.113	.113
10	.113	.114	.114	.113	.113	.113	.112	.113	.114	.113	.113

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	.425	.302	.259	.323	.282	.717	.287	.267	.391	.503	1.000
2	.504	.281	.213	.215	.214	.359	.218	.208	.236	.336	.517
3	.256	.211	.197	.197	.244	.273	.247	.238	.204	.216	.256
4	.197	.240	.216	.197	.315	.265	.293	.338	.205	.245	.363
5	.208	.394	.259	.206	.191	.233	.207	.216	.254	.376	.700
6	.193	.204	.194	.210	.206	.302	.215	.269	.208	.215	.322
7	.191	.193	.187	.270	.219	.467	.251	.424	.226	.207	.210
8	.200	.212	.201	.185	.207	.204	.180	.207	.214	.197	.195
9	.199	.299	.225	.197	.202	.194	.180	.192	.204	.195	.194
10	.193	.187	.200	.188	.196	.192	.179	.191	.203	.194	.193

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	.681	.479	.407	.481	.402	.985	.417	.436	.623	.754	.999
2	.855	.446	.334	.317	.294	.489	.302	.311	.371	.489	.769
3	.407	.318	.272	.251	.331	.368	.348	.342	.278	.311	.391
4	.262	.369	.317	.257	.446	.380	.426	.496	.284	.380	.545
5	.298	.598	.389	.283	.253	.368	.295	.324	.374	.562	.981
6	.241	.266	.245	.286	.304	.517	.337	.446	.294	.316	.499
7	.236	.241	.235	.392	.349	.804	.401	.683	.353	.275	.291
8	.255	.298	.257	.224	.264	.291	.219	.297	.273	.245	.243
9	.274	.467	.325	.246	.253	.239	.215	.235	.258	.240	.238
10	.238	.239	.253	.228	.243	.234	.212	.234	.255	.239	.237

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	.499	.372	.317	.385	.325	.948	.334	.329	.475	.592	1.000
2	.576	.342	.257	.248	.240	.419	.244	.240	.286	.405	.606
3	.318	.251	.218	.211	.271	.305	.276	.270	.225	.248	.311
4	.219	.284	.251	.214	.370	.296	.338	.395	.227	.291	.420
5	.249	.466	.309	.230	.208	.270	.230	.245	.294	.437	.766
6	.209	.229	.211	.233	.239	.371	.252	.324	.234	.257	.400
7	.206	.209	.203	.316	.272	.565	.307	.504	.271	.230	.245
8	.219	.241	.218	.197	.224	.244	.192	.247	.229	.212	.211
9	.227	.356	.262	.214	.219	.210	.190	.206	.222	.210	.209
10	.208	.206	.219	.201	.212	.206	.188	.205	.221	.210	.209

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	.542	.391	.331	.501	.392	.991	.396	.367	.590	.643	.996
2	.785	.397	.279	.281	.266	.471	.273	.259	.312	.435	.651
3	.361	.270	.232	.223	.315	.341	.316	.318	.241	.265	.334
4	.233	.313	.280	.226	.490	.342	.406	.535	.240	.310	.459
5	.287	.581	.343	.244	.218	.288	.243	.260	.317	.482	.995
6	.219	.246	.221	.252	.254	.420	.272	.365	.249	.282	.445
7	.215	.217	.214	.390	.308	.731	.358	.645	.304	.243	.263

8	.229	.253	.227	.206	.238	.275	.203	.276	.244	.223	.221
9	.240	.403	.275	.223	.230	.219	.200	.216	.233	.220	.218
10	.217	.216	.229	.210	.222	.215	.199	.215	.232	.219	.218

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	.581	.456	.408	.426	.392	.996	.406	.398	.541	.640	1.000
2	.652	.404	.318	.304	.302	.483	.307	.308	.357	.466	.656
3	.387	.314	.275	.265	.329	.360	.331	.332	.292	.321	.386
4	.275	.348	.304	.268	.427	.353	.399	.454	.292	.360	.480
5	.313	.531	.373	.288	.259	.333	.290	.307	.365	.497	.821
6	.259	.285	.261	.287	.299	.429	.312	.381	.295	.325	.472
7	.255	.258	.248	.356	.328	.627	.367	.556	.329	.292	.314
8	.274	.297	.273	.239	.284	.306	.233	.311	.292	.266	.264
9	.280	.398	.323	.267	.276	.260	.229	.255	.282	.261	.259
10	.258	.250	.274	.247	.265	.255	.226	.254	.279	.261	.259

********* GAS SATURATION *********

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	.100	.111	.116	.107	.118	.002	.115	.115	.091	.069	.000
2	.075	.113	.122	.118	.133	.112	.124	.117	.114	.105	.069
3	.113	.120	.120	.129	.123	.118	.119	.117	.114	.103	.100
4	.110	.109	.112	.122	.105	.117	.109	.086	.104	.097	.085
5	.101	.080	.105	.114	.117	.114	.112	.107	.108	.082	.028
6	.097	.097	.099	.103	.102	.099	.100	.094	.096	.098	.084
7	.092	.092	.093	.084	.093	.058	.085	.059	.086	.086	.085
8	.087	.088	.092	.088	.094	.086	.085	.083	.092	.082	.080
9	.084	.074	.084	.084	.085	.083	.083	.080	.080	.078	.078
10	.083	.084	.083	.084	.083	.082	.082	.079	.078	.077	.076

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	.090	.102	.102	.101	.102	.000	.102	.101	.082	.064	.000
2	.050	.102	.102	.105	.110	.104	.108	.104	.102	.102	.065
3	.102	.102	.102	.108	.108	.109	.107	.106	.102	.101	.097
4	.102	.102	.102	.103	.089	.106	.101	.072	.102	.093	.078
5	.097	.068	.101	.102	.102	.101	.102	.102	.102	.072	.001
6	.095	.093	.096	.100	.100	.094	.098	.089	.094	.097	.076
7	.089	.089	.090	.078	.088	.044	.079	.048	.083	.083	.082
8	.085	.086	.095	.086	.098	.083	.083	.081	.101	.080	.079
9	.081	.068	.081	.082	.083	.081	.080	.078	.079	.076	.076
10	.080	.080	.080	.081	.081	.079	.079	.077	.076	.075	.075

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	.068	.081	.091	.098	.096	.045	.092	.095	.073	.053	.000
2	.060	.086	.097	.104	.107	.104	.105	.103	.085	.071	.050
3	.086	.092	.099	.105	.107	.106	.105	.104	.089	.077	.074
4	.087	.084	.091	.095	.091	.104	.100	.079	.082	.072	.062
5	.080	.063	.080	.090	.094	.094	.090	.082	.075	.057	.032
6	.077	.075	.077	.080	.081	.074	.078	.070	.071	.069	.058
7	.073	.071	.073	.070	.073	.050	.065	.051	.064	.063	.064
8	.066	.066	.068	.068	.067	.065	.066	.062	.061	.061	.061
9	.064	.057	.062	.064	.063	.064	.063	.061	.059	.058	.059
10	.063	.064	.063	.064	.064	.063	.063	.061	.058	.058	.059

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	.037	.054	.067	.075	.072	.001	.067	.069	.049	.025	.001
2	.026	.061	.076	.084	.088	.077	.089	.082	.065	.047	.029
3	.062	.072	.082	.091	.103	.102	.101	.088	.070	.059	.052
4	.070	.064	.073	.079	.066	.101	.075	.053	.065	.053	.038
5	.061	.039	.059	.073	.079	.072	.072	.063	.055	.037	.000
6	.064	.060	.063	.065	.063	.050	.059	.049	.055	.051	.035
7	.061	.059	.060	.054	.053	.024	.045	.027	.048	.048	.047
8	.054	.051	.055	.055	.054	.050	.054	.047	.048	.047	.048
9	.049	.039	.046	.051	.051	.051	.051	.048	.045	.047	.046
10	.053	.051	.051	.052	.051	.051	.052	.048	.047	.046	.048

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	.045	.057	.068	.075	.073	.022	.069	.072	.050	.034	.000
2	.040	.062	.074	.082	.086	.078	.087	.080	.062	.047	.033
3	.062	.069	.079	.085	.103	.103	.102	.085	.067	.057	.052
4	.066	.063	.070	.075	.067	.102	.075	.055	.061	.051	.042
5	.059	.044	.059	.069	.073	.071	.067	.060	.054	.038	.019
6	.059	.057	.059	.061	.060	.052	.056	.049	.051	.049	.038
7	.056	.054	.056	.051	.052	.031	.046	.032	.046	.044	.044
8	.051	.049	.051	.051	.051	.048	.048	.044	.045	.043	.045
9	.046	.039	.045	.047	.047	.046	.047	.044	.042	.043	.042
10	.048	.047	.046	.048	.048	.048	.047	.044	.043	.042	.041

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	.039	.051	.062	.063	.063	.001	.058	.064	.041	.029	.000
2	.024	.054	.068	.076	.080	.071	.079	.075	.057	.043	.027
3	.056	.064	.073	.080	.102	.102	.102	.075	.061	.052	.047
4	.062	.057	.065	.070	.053	.098	.063	.041	.056	.046	.036
5	.053	.034	.053	.065	.068	.066	.062	.055	.049	.033	.000
6	.054	.052	.055	.056	.055	.045	.051	.043	.047	.044	.032
7	.051	.051	.052	.044	.045	.020	.039	.022	.040	.041	.040
8	.046	.044	.048	.048	.046	.042	.044	.038	.041	.039	.041
9	.042	.034	.041	.044	.043	.043	.043	.040	.038	.038	.039
10	.044	.044	.042	.044	.043	.043	.043	.040	.039	.039	.039

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	.034	.041	.050	.060	.058	.002	.055	.054	.038	.025	.000
2	.030	.048	.059	.066	.068	.061	.068	.063	.047	.035	.024
3	.049	.055	.063	.069	.087	.101	.101	.066	.051	.042	.039
4	.052	.049	.056	.060	.053	.080	.057	.042	.046	.038	.031
5	.045	.033	.046	.055	.059	.055	.053	.046	.040	.028	.013
6	.047	.045	.047	.049	.047	.038	.042	.037	.039	.037	.027
7	.044	.043	.044	.039	.039	.022	.034	.022	.033	.033	.032
8	.040	.037	.039	.040	.039	.036	.038	.031	.034	.031	.033
9	.035	.031	.034	.036	.036	.036	.036	.034	.029	.033	.033
10	.037	.037	.036	.037	.036	.036	.037	.033	.032	.032	.031

***** BUBBLE POINT PRESSURE DISTRIBUTION *****

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 3

	1	2	3	4	5	6	7	8	9	10	11

1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
2	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
3	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
4	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
5	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
6	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
7	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
8	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
9	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.
10	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.	1800.

********** END OF INITIALIZATION **********

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*                                       *
*  WELL REPORT: BOAST II (RELEASE 1.1)  *
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********** WELL REPORT FOR TIME STEP NUMBER 730 ELAPSED TIME = 3650.000 DAYS FROM BEGINNING OF SIMULATION ******

WELL #	ID	LOCATION I	J	K	CALC BHFP	SPEC BHFP	SPEC PI	RATE OIL STB/D	GAS MCF/D	WATER STB/D	GOR	WOR	CUMULATIVE OIL MSTB	GAS MMCF	WATER MSTB
1	P-1	3	3	1	1587.	1587.	1.058	2.7	1.	1.4	525.5	.529	16.3	9.	4.0
1	P-1	3	3	2	1587.	1587.	1.044	3.6	2.	4.4	528.0	1.234	20.9	11.	11.8
1	P-1	3	3	3	1587.	1587.	2.933	27.1	15.	43.1	538.7	1.592	150.5	81.	103.3
1	P-1	3	3	4	1587.	1587.	1.494	8.7	5.	56.2	539.8	6.476	44.7	24.	178.1
1	P-1	3	3	5	1587.	1587.	1.867	13.4	7.	61.9	542.0	4.606	87.8	48.	156.8
1	P-1	3	3	6	1587.	1587.	1.113	6.8	4.	39.6	540.8	5.800	42.0	23.	112.3
1	P-1	3	3	7	1587.	1587.	1.970	17.0	9.	129.0	546.6	7.586	97.4	54.	319.0
2	P-2A	10	2	1	1587.	1587.	1.056	2.3	1.	12.0	529.2	5.160	16.9	9.	45.6
2	P-2A	10	2	2	1587.	1587.	1.043	2.8	1.	18.5	531.8	6.610	18.7	10.	67.3
2	P-2A	10	2	3	1587.	1587.	2.864	22.4	12.	163.9	543.0	7.316	116.5	64.	492.5
2	P-2A	10	2	4	1587.	1587.	1.476	10.1	5.	132.4	538.8	13.053	52.8	29.	496.4
2	P-2A	10	2	5	1587.	1587.	1.837	13.4	7.	170.1	539.5	12.670	74.5	41.	481.0
2	P-2A	10	2	6	1587.	1587.	1.109	7.3	4.	97.6	538.6	13.417	41.1	23.	292.3
2	P-2A	10	2	7	1587.	1587.	1.936	20.6	11.	270.5	542.2	13.148	98.5	54.	775.2
3	P-4	9	8	1	1587.	1587.	1.056	.4	0.	.0	522.9	.035	2.9	2.	.1
3	P-4	9	8	2	1587.	1587.	1.043	3.9	2.	.3	525.2	.079	15.0	8.	.7
3	P-4	9	8	3	1587.	1587.	2.864	26.8	14.	16.7	533.8	.622	119.4	64.	41.8
3	P-4	9	8	4	1587.	1587.	1.476	10.1	5.	30.1	537.7	2.968	47.5	26.	83.3
3	P-4	9	8	5	1587.	1587.	1.837	16.2	9.	32.8	539.8	2.027	87.5	47.	80.5
3	P-4	9	8	6	1587.	1587.	1.109	9.2	5.	22.1	539.8	2.395	48.2	26.	56.0
3	P-4	9	8	7	1587.	1587.	1.936	19.0	10.	69.1	545.2	3.635	96.1	52.	174.9
4	P-3	3	8	1	1587.	1587.	1.116	1.5	1.	.2	523.6	.104	8.5	4.	.4
4	P-3	3	8	2	1587.	1587.	1.088	3.6	2.	1.0	525.8	.269	18.1	10.	1.9
4	P-3	3	8	3	1587.	1587.	4.886	42.8	23.	38.7	534.8	.904	216.1	116.	90.9
4	P-3	3	8	4	1587.	1587.	1.992	9.5	5.	69.9	537.5	7.368	52.6	28.	197.2
4	P-3	3	8	5	1587.	1587.	2.774	19.6	11.	68.1	539.9	3.479	122.3	66.	162.3
4	P-3	3	8	6	1587.	1587.	1.228	7.2	4.	33.6	539.3	4.688	46.4	25.	80.1
4	P-3	3	8	7	1587.	1587.	2.950	23.6	13.	127.1	545.2	5.383	139.8	76.	298.8
5	P-5	6	5	1	1587.	1587.	1.120	.2	0.	.0	522.8	.095	3.6	2.	.2
5	P-5	6	5	2	1587.	1587.	1.090	2.7	1.	.6	524.7	.205	12.8	7.	1.5
5	P-5	6	5	3	1587.	1587.	4.962	31.7	17.	36.2	532.5	1.142	152.3	81.	95.8
5	P-5	6	5	4	1587.	1587.	2.012	7.8	4.	42.3	534.4	5.423	38.5	21.	133.9
5	P-5	6	5	5	1587.	1587.	2.778	14.7	8.	55.2	536.2	3.766	85.8	46.	142.5
5	P-5	6	5	6	1587.	1587.	1.232	5.4	3.	26.5	535.6	4.923	31.4	17.	71.5
5	P-5	6	5	7	1587.	1587.	2.990	18.1	10.	117.8	540.7	6.518	98.7	54.	304.5
6	I-70	2	9	1	1658.	1587.	1.118	.0	0.	-17.2	.0	.000	.0	0.	-60.7
6	I-70	2	9	2	1668.	1587.	1.090	.0	0.	-30.7	.0	.000	.0	0.	-101.8
6	I-70	2	9	3	1691.	1587.	4.902	.0	0.	-67.0	.0	.000	.0	0.	-232.9
6	I-70	2	9	4	1724.	1587.	2.996	.0	0.	-78.0	.0	.000	.0	0.	-378.2
6	I-70	2	9	5	1733.	1587.	2.752	.0	0.	-76.9	.0	.000	.0	0.	-227.7
6	I-70	2	9	6	1745.	1587.	1.228	.0	0.	-32.0	.0	.000	.0	0.	-138.1
6	I-70	2	9	7	1756.	1587.	2.958	.0	0.	-87.0	.0	.000	.0	0.	-279.8
7	I-71	6	1	1	1754.	1587.	1.132	.0	0.	-25.6	.0	.000	.0	0.	-93.5
7	I-71	6	1	2	1757.	1587.	1.100	.0	0.	-24.9	.0	.000	.0	0.	-90.8
7	I-71	6	1	3	1713.	1587.	5.390	.0	0.	-122.0	.0	.000	.0	0.	-445.4
7	I-71	6	1	4	1745.	1587.	2.122	.0	0.	-48.0	.0	.000	.0	0.	-175.2
7	I-71	6	1	5	1743.	1587.	2.970	.0	0.	-67.2	.0	.000	.0	0.	-245.9
7	I-71	6	1	6	1763.	1587.	1.256	.0	0.	-28.4	.0	.000	.0	0.	-103.7
7	I-71	6	1	7	1757.	1587.	3.204	.0	0.	-72.5	.0	.000	.0	0.	-264.6
8	I-72	11	1	1	1861.	1587.	1.142	.0	0.	-24.6	.0	.000	.0	0.	-90.0
8	I-72	11	1	2	1856.	1587.	1.108	.0	0.	-23.9	.0	.000	.0	0.	-87.3
8	I-72	11	1	3	1747.	1587.	5.752	.0	0.	-124.2	.0	.000	.0	0.	-453.3
8	I-72	11	1	4	1780.	1587.	2.214	.0	0.	-47.8	.0	.000	.0	0.	-174.6
8	I-72	11	1	5	1766.	1587.	3.132	.0	0.	-67.6	.0	.000	.0	0.	-246.7
8	I-72	11	1	6	1794.	1587.	1.278	.0	0.	-27.6	.0	.000	.0	0.	-100.7
8	I-72	11	1	7	1769.	1587.	3.384	.0	0.	-73.1	.0	.000	.0	0.	-266.6
9	I-75	2	5	1	1668.	1587.	1.118	.0	0.	-20.2	.0	.000	.0	0.	-63.3
9	I-75	2	5	2	1677.	1587.	1.090	.0	0.	-30.0	.0	.000	.0	0.	-110.0
9	I-75	2	5	3	1699.	1587.	4.902	.0	0.	-83.8	.0	.000	.0	0.	-260.5
9	I-75	2	5	4	1728.	1587.	1.996	.0	0.	-54.8	.0	.000	.0	0.	-248.9
9	I-75	2	5	5	1739.	1587.	2.752	.0	0.	-85.1	.0	.000	.0	0.	-252.9
9	I-75	2	5	6	1751.	1587.	1.224	.0	0.	-33.6	.0	.000	.0	0.	-151.6
9	I-75	2	5	7	1760.	1587.	2.958	.0	0.	-81.3	.0	.000	.0	0.	-332.0
10	I-76	1	2	1	1694.	1587.	1.124	.0	0.	-25.4	.0	.000	.0	0.	-84.8
10	I-76	1	2	2	1704.	1587.	1.096	.0	0.	-24.4	.0	.000	.0	0.	-102.5
10	I-76	1	2	3	1714.	1587.	5.156	.0	0.	-129.7	.0	.000	.0	0.	-362.4
10	I-76	1	2	4	1735.	1587.	2.062	.0	0.	-46.6	.0	.000	.0	0.	-201.4
10	I-76	1	2	5	1741.	1587.	2.864	.0	0.	-64.8	.0	.000	.0	0.	-254.7
10	I-76	1	2	6	1753.	1587.	1.244	.0	0.	-28.1	.0	.000	.0	0.	-121.4
10	I-76	1	2	7	1758.	1587.	3.086	.0	0.	-69.8	.0	.000	.0	0.	-292.0
11	I-104	11	5	1	1667.	1587.	1.124	.0	0.	-26.3	.0	.000	.0	0.	-97.1
11	I-104	11	5	2	1675.	1587.	1.096	.0	0.	-25.6	.0	.000	.0	0.	-93.1
11	I-104	11	5	3	1677.	1587.	5.156	.0	0.	-120.5	.0	.000	.0	0.	-433.8
11	I-104	11	5	4	1699.	1587.	2.062	.0	0.	-48.2	.0	.000	.0	0.	-175.9
11	I-104	11	5	5	1700.	1587.	2.864	.0	0.	-66.9	.0	.000	.0	0.	-246.8
11	I-104	11	5	6	1713.	1587.	1.244	.0	0.	-29.1	.0	.000	.0	0.	-105.7

11	I-104	11	5	7	1715.	1587.	3.086	.0	0.	-72.1	.0	.000	.0	0.	-266.7
12	I-204	11	1	1	1862.	1587.	1.128	.0	0.	-26.0	.0	.000	.0	0.	-95.0
12	I-204	11	1	2	1857.	1587.	1.098	.0	0.	-25.3	.0	.000	.0	0.	-92.5
12	I-204	11	1	3	1748.	1587.	5.236	.0	0.	-120.9	.0	.000	.0	0.	-441.2
12	I-204	11	1	4	1781.	1587.	2.086	.0	0.	-48.1	.0	.000	.0	0.	-175.9
12	I-204	11	1	5	1767.	1587.	2.910	.0	0.	-67.2	.0	.000	.0	0.	-245.1
12	I-204	11	1	6	1795.	1587.	1.250	.0	0.	-28.9	.0	.000	.0	0.	-105.3
12	I-204	11	1	7	1770.	1587.	3.136	.0	0.	-72.4	.0	.000	.0	0.	-264.2
13	I-317	6	1	1	1754.	1587.	1.132	.0	0.	-25.7	.0	.000	.0	0.	-93.7
13	I-317	6	1	2	1757.	1587.	1.100	.0	0.	-24.9	.0	.000	.0	0.	-91.0
13	I-317	6	1	3	1713.	1587.	5.390	.0	0.	-122.2	.0	.000	.0	0.	-446.1
13	I-317	6	1	4	1745.	1587.	2.112	.0	0.	-47.9	.0	.000	.0	0.	-174.7
13	I-317	6	1	5	1743.	1587.	2.970	.0	0.	-67.4	.0	.000	.0	0.	-246.3
13	I-317	6	1	6	1763.	1587.	1.236	.0	0.	-28.0	.0	.000	.0	0.	-102.3
13	I-317	6	1	7	1757.	1587.	3.204	.0	0.	-72.7	.0	.000	.0	0.	-265.1
14	P-6	9	5	1	1587.	1587.	1.114	.8	0.	.1	523.2	.150	6.8	4.	.6
14	P-6	9	5	2	1587.	1587.	1.086	3.3	2.	.9	525.5	.284	16.0	8.	2.6
14	P-6	9	5	3	1587.	1587.	4.770	34.7	19.	40.7	533.8	1.173	162.9	87.	115.2
14	P-6	9	5	4	1587.	1587.	1.964	10.0	5.	43.1	535.8	4.296	48.4	26.	133.9
14	P-6	9	5	5	1587.	1587.	2.692	17.0	9.	55.9	537.4	3.287	95.6	52.	145.5
14	P-6	9	5	6	1587.	1587.	1.220	7.0	4.	28.6	537.3	4.064	38.8	21.	76.0
14	P-6	9	5	7	1587.	1587.	2.892	21.2	11.	114.6	542.0	5.410	109.0	59.	298.4
15	P-7	5	8	1	1587.	1587.	1.112	.9	0.	.1	523.2	.071	5.2	3.	.2
15	P-7	5	8	2	1587.	1587.	1.086	3.8	2.	.6	525.5	.156	16.5	9.	1.2
15	P-7	5	8	3	1587.	1587.	4.748	40.2	21.	31.9	533.9	.795	193.0	103.	73.2
15	P-7	5	8	4	1587.	1587.	1.958	11.1	6.	47.1	537.3	4.245	57.6	31.	126.4
15	P-7	5	8	5	1587.	1587.	2.682	20.3	11.	55.9	539.2	2.749	118.0	64.	130.8
15	P-7	5	8	6	1587.	1587.	1.220	8.6	5.	29.6	539.4	3.459	48.3	26.	71.2
15	P-7	5	8	7	1587.	1587.	2.880	24.5	13.	112.7	544.8	4.593	133.7	73.	273.4
16	P-8	4	5	1	1587.	1587.	1.114	1.2	1.	.2	523.5	.137	9.0	5.	.5
16	P-8	4	5	2	1587.	1587.	1.086	3.5	2.	1.2	525.8	.349	19.1	10.	2.7
16	P-8	4	5	3	1587.	1587.	4.770	37.3	20.	45.6	534.9	1.222	194.3	104.	107.3
16	P-8	4	5	4	1587.	1587.	1.964	10.0	5.	63.9	537.8	6.406	53.1	29.	173.5
16	P-8	4	5	5	1587.	1587.	2.692	18.6	10.	68.3	539.7	3.667	114.4	62.	165.8
16	P-8	4	5	6	1587.	1587.	1.220	7.2	4.	37.0	539.7	5.146	44.9	24.	93.0
16	P-8	4	5	7	1587.	1587.	2.892	23.4	13.	142.1	545.1	6.072	130.5	71.	339.4
17	I-9	6	7	1	1651.	1587.	1.120	.0	0.	-24.3	.0	.000	.0	0.	-69.2
17	I-9	6	7	2	1660.	1587.	1.090	.0	0.	-28.5	.0	.000	.0	0.	-113.0
17	I-9	6	7	3	1678.	1587.	4.962	.0	0.	-100.7	.0	.000	.0	0.	-283.7
17	I-9	6	7	4	1706.	1587.	2.012	.0	0.	-52.6	.0	.000	.0	0.	-229.5
17	I-9	6	7	5	1716.	1587.	2.778	.0	0.	-72.6	.0	.000	.0	0.	-267.0
17	I-9	6	7	6	1728.	1587.	1.228	.0	0.	-32.1	.0	.000	.0	0.	-138.9
17	I-9	6	7	7	1737.	1587.	2.990	.0	0.	-78.1	.0	.000	.0	0.	-317.9
18	I-10	8	4	1	1642.	1587.	1.114	.0	0.	-17.8	.0	.000	.0	0.	-69.6
18	I-10	8	4	2	1652.	1587.	1.086	.0	0.	-36.2	.0	.000	.0	0.	-124.9
18	I-10	8	4	3	1677.	1587.	4.770	.0	0.	-65.0	.0	.000	.0	0.	-247.9
18	I-10	8	4	4	1701.	1587.	1.964	.0	0.	-62.2	.0	.000	.0	0.	-269.0
18	I-10	8	4	5	1710.	1587.	2.692	.0	0.	-66.6	.0	.000	.0	0.	-210.7
18	I-10	8	4	6	1721.	1587.	1.220	.0	0.	-38.6	.0	.000	.0	0.	-179.8
18	I-10	8	4	7	1732.	1587.	2.892	.0	0.	-102.3	.0	.000	.0	0.	-317.3
19	I-11	5	4	1	1641.	1587.	1.112	.0	0.	-16.0	.0	.000	.0	0.	-68.6
19	I-11	5	4	2	1651.	1587.	1.084	.0	0.	-31.8	.0	.000	.0	0.	-114.7
19	I-11	5	4	3	1678.	1587.	4.710	.0	0.	-63.3	.0	.000	.0	0.	-255.9
19	I-11	5	4	4	1703.	1587.	1.948	.0	0.	-73.0	.0	.000	.0	0.	-269.2
19	I-11	5	4	5	1713.	1587.	2.666	.0	0.	-63.6	.0	.000	.0	0.	-209.7
19	I-11	5	4	6	1723.	1587.	1.218	.0	0.	-41.6	.0	.000	.0	0.	-187.2
19	I-11	5	4	7	1735.	1587.	2.862	.0	0.	-99.5	.0	.000	.0	0.	-313.9
20	I-12R	8	7	1	1644.	1587.	1.116	.0	0.	-19.7	.0	.000	.0	0.	-64.1
20	I-12R	8	7	2	1653.	1587.	1.088	.0	0.	-34.7	.0	.000	.0	0.	-119.4
20	I-12R	8	7	3	1676.	1587.	4.852	.0	0.	-74.5	.0	.000	.0	0.	-245.3
20	I-12R	8	7	4	1703.	1587.	1.984	.0	0.	-57.8	.0	.000	.0	0.	-261.2
20	I-12R	8	7	5	1713.	1587.	2.728	.0	0.	-81.1	.0	.000	.0	0.	-239.6
20	I-12R	8	7	6	1725.	1587.	1.226	.0	0.	-35.7	.0	.000	.0	0.	-158.9
20	I-12R	8	7	7	1735.	1587.	2.934	.0	0.	-85.4	.0	.000	.0	0.	-330.7
21	P-13	6	3	1	1587.	1587.	1.059	1.1	1.	1.0	513.2	.894	8.2	4.	5.4
21	P-13	6	3	2	1587.	1587.	1.044	2.9	2.	3.1	526.3	1.089	12.6	6.	12.0
21	P-13	6	3	3	1587.	1587.	3.929	26.8	14.	75.5	535.7	2.818	135.0	73.	213.8
21	P-13	6	3	4	1587.	1587.	1.493	8.8	5.	55.2	537.0	6.243	41.5	22.	175.6
21	P-13	6	3	5	1587.	1587.	1.866	13.1	7.	65.3	539.4	4.987	68.8	37.	185.5
21	P-13	6	3	6	1587.	1587.	1.113	7.0	4.	40.8	538.2	5.839	35.2	19.	117.5
21	P-13	6	3	7	1587.	1587.	1.968	15.3	8.	110.6	544.5	7.237	76.6	42.	320.7
22	I-329	4	1	1	1658.	1587.	1.124	.0	0.	-30.9	.0	.000	.0	0.	-103.9
22	I-329	4	1	2	1667.	1587.	1.096	.0	0.	-28.5	.0	.000	.0	0.	-121.0
22	I-329	4	1	3	1673.	1587.	5.156	.0	0.	-87.2	.0	.000	.0	0.	-275.3
22	I-329	4	1	4	1687.	1587.	2.062	.0	0.	-53.4	.0	.000	.0	0.	-235.2
22	I-329	4	1	5	1690.	1587.	2.864	.0	0.	-76.0	.0	.000	.0	0.	-230.9
22	I-329	4	1	6	1700.	1587.	1.244	.0	0.	-32.4	.0	.000	.0	0.	-146.2
22	I-329	4	1	7	1704.	1587.	3.086	.0	0.	-80.4	.0	.000	.0	0.	-306.6
23	I-330	9	1	1	1681.	1587.	1.124	.0	0.	-28.7	.0	.000	.0	0.	-86.6
23	I-330	9	1	2	1689.	1587.	1.096	.0	0.	-26.0	.0	.000	.0	0.	-105.0
23	I-330	9	1	3	1696.	1587.	5.156	.0	0.	-114.2	.0	.000	.0	0.	-310.6
23	I-330	9	1	4	1709.	1587.	2.062	.0	0.	-49.0	.0	.000	.0	0.	-220.8
23	I-330	9	1	5	1707.	1587.	2.864	.0	0.	-68.0	.0	.000	.0	0.	-258.9
23	I-330	9	1	6	1717.	1587.	1.244	.0	0.	-29.6	.0	.000	.0	0.	-131.4
23	I-330	9	1	7	1719.	1587.	3.086	.0	0.	-73.3	.0	.000	.0	0.	-305.8
24	I-14	4	7	1	1644.	1587.	1.114	.0	0.	-18.3	.0	.000	.0	0.	-74.8
24	I-14	4	7	2	1654.	1587.	1.086	.0	0.	-33.2	.0	.000	.0	0.	-117.8
24	I-14	4	7	3	1678.	1587.	4.790	.0	0.	-65.4	.0	.000	.0	0.	-264.1
24	I-14	4	7	4	1705.	1587.	1.968	.0	0.	-66.0	.0	.000	.0	0.	-272.8
24	I-14	4	7	5	1717.	1587.	2.700	.0	0.	-65.5	.0	.000	.0	0.	-212.4

24	I-14	4	7	6	1728.	1587.	1.222	.0	0.	-41.0	.0	.000	.0	0.	-176.5
24	I-14	4	7	7	1740.	1587.	2.902	.0	0.	-99.4	.0	.000	.0	0.	-300.8
25	P-15	4	2	1	1587.	1587.	1.112	2.2	1.	6.8	527.1	3.146	16.4	9.	22.7
25	P-15	4	2	2	1587.	1587.	1.086	3.0	2.	11.8	529.4	3.988	17.9	10.	39.5
25	P-15	4	2	3	1587.	1587.	4.728	33.6	18.	102.9	538.5	3.064	193.1	105.	264.2
25	P-15	4	2	4	1587.	1587.	1.952	10.6	6.	86.3	539.0	8.144	54.7	30.	283.1
25	P-15	4	2	5	1587.	1587.	2.674	18.1	10.	103.8	541.2	5.740	107.7	59.	286.6
25	P-15	4	2	6	1587.	1587.	1.218	7.5	4.	53.9	540.4	7.203	41.3	23.	168.5
25	P-15	4	2	7	1587.	1587.	2.872	23.1	13.	185.7	544.4	8.031	129.0	71.	510.2
26	P-16	8	2	1	1587.	1587.	1.114	2.0	1.	1.5	525.0	.744	16.8	9.	3.8
26	P-16	8	2	2	1587.	1587.	1.086	3.2	2.	4.6	527.6	1.434	22.8	12.	11.1
26	P-16	8	2	3	1587.	1587.	4.770	32.0	17.	102.1	538.1	3.189	204.2	110.	240.0
26	P-16	8	2	4	1587.	1587.	1.964	9.8	5.	74.5	538.1	7.576	54.5	30.	222.7
26	P-16	8	2	5	1587.	1587.	2.692	15.4	8.	101.5	539.5	6.589	102.7	56.	259.9
26	P-16	8	2	6	1587.	1587.	1.220	6.5	3.	46.1	538.9	7.095	41.6	23.	123.2
26	P-16	8	2	7	1587.	1587.	2.892	20.6	11.	182.9	543.2	8.858	119.6	66.	471.6
27	I-17	3	4	1	1660.	1587.	1.116	.0	0.	-21.5	.0	.000	.0	0.	-80.0
27	I-17	3	4	2	1670.	1587.	1.088	.0	0.	-37.5	.0	.000	.0	0.	-128.9
27	I-17	3	4	3	1692.	1587.	4.846	.0	0.	-66.2	.0	.000	.0	0.	-267.1
27	I-17	3	4	4	1713.	1587.	1.982	.0	0.	-64.2	.0	.000	.0	0.	-269.6
27	I-17	3	4	5	1723.	1587.	2.726	.0	0.	-62.8	.0	.000	.0	0.	-208.8
27	I-17	3	4	6	1734.	1587.	1.226	.0	0.	-39.7	.0	.000	.0	0.	-169.4
27	I-17	3	4	7	1744.	1587.	2.930	.0	0.	-96.9	.0	.000	.0	0.	-295.3
28	P-18	10	6	1	1587.	1587.	1.114	.3	0.	.1	522.9	.398	3.8	2.	.6
28	P-18	10	6	2	1587.	1587.	1.088	2.2	1.	1.3	525.1	.612	12.0	6.	3.4
28	P-18	10	6	3	1587.	1587.	4.808	24.0	13.	56.5	533.1	2.353	132.1	70.	145.1
28	P-18	10	6	4	1587.	1587.	1.972	8.5	5.	44.7	534.5	5.260	41.9	22.	139.2
28	P-18	10	6	5	1587.	1587.	2.708	13.6	7.	61.4	536.0	4.502	77.3	42.	168.2
28	P-18	10	6	6	1587.	1587.	1.222	5.8	3.	28.5	535.8	4.895	32.4	17.	80.0
28	P-18	10	6	7	1587.	1587.	2.912	18.4	10.	118.6	539.8	6.455	92.6	50.	322.6
TOTALS								1072.0	576.8	-1585.4			5829.6	3150.5	-10024.5

********** END OF WELL REPORT **********

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*                                                                           *
*          WATERFLOOD DISPLACEMENT FOR E.N. WOODS LEASE                     *
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*                                                               *
*                                                               *
*          SUMMARY REPORT: BOAST II (RELEASE 1.1)               *
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ELAPSED TIME (DAYS)          =  3650.00   TIME STEP NUMBER            =  730      TIME STEP SIZE (DAYS)        =     5.00

CURRENT AVG RES PRESSURE     =   1667.6   PREVIOUS AVG RES PRESSURE   =   1667.6  PRESSURE DPMAX(  2,  2,  2)  =      -.2
OIL DSMAX(  2,  9,  7)       =  -.00065   GAS DSMAX(  2,  2,  2)      =   .00003  WATER DSMAX(  2,  9,  7)     =   .00065
OIL MATERIAL BALANCE (%)     = -.003728   GAS MATERIAL BALANCE (%)    = -.003463  WATER MATERIAL BALANCE (%)   = -.000028
CUM. OIL MATERIAL BALANCE(%)=-3.045169    CUM. GAS MATERIAL BALANCE(%) =-2.957159  CUM. WATER MATERIAL BALANCE(%)= -.008019

OIL PRODUCTION RATE (STB/D) =   1072.0    CUM. OIL PRODUCTION (STB)    = .5830E+07
GAS PRODUCTION RATE (MSCF/D)=    576.8    CUM. GAS PRODUCTION (MSCF)   = .3151E+07
WATER PRODUCTION RATE(STB/D)=   4635.4
                                          CUM. WATER PRODUCTION (STB)  = .1268E+08

GAS INJECTION RATE (MSCF/D) =       .0    CUM. GAS INJECTION (MSCF)    = .0000E+00
WATER INJECTION RATE (STB/D)=  -6220.8    CUM. WATER INJECTION (STB)   =-.2271E+08

PRODUCING WOR (STB/STB)      =    4.324   CUM. WOR (STB/STB)           =    2.175
PRODUCING GOR (SCF/STB)      =    538.1   CUM. GOR (SCF/STB)           =    540.4


AQUIFER MODEL FOR ROCK REGION   1:
AQUIFER INFLUX RATE (STB/D) =       .0    CUM. AQUIFER INFLUX (STB)    = .0000E+00
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1

***** RESERVOIR PRESSURE DISTRIBUTION *****

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	1677.	1665.	1644.	1644.	1639.	1743.	1640.	1625.	1668.	1648.	1850.
2	1683.	1659.	1629.	1604.	1625.	1634.	1624.	1596.	1637.	1612.	1643.
3	1644.	1633.	1598.	1609.	1610.	1593.	1608.	1613.	1623.	1624.	1629.
4	1642.	1641.	1643.	1620.	1623.	1608.	1615.	1625.	1617.	1620.	1624.
5	1648.	1653.	1632.	1590.	1601.	1587.	1600.	1607.	1589.	1617.	1655.
6	1634.	1634.	1623.	1613.	1610.	1611.	1610.	1610.	1597.	1588.	1601.
7	1625.	1623.	1617.	1626.	1614.	1637.	1627.	1628.	1605.	1596.	1596.
8	1624.	1621.	1591.	1605.	1589.	1611.	1609.	1609.	1588.	1593.	1593.
9	1639.	1644.	1626.	1611.	1602.	1604.	1602.	1601.	1596.	1594.	1593.
10	1638.	1638.	1626.	1612.	1604.	1603.	1601.	1601.	1597.	1594.	1594.

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	1686.	1675.	1654.	1653.	1648.	1745.	1650.	1635.	1677.	1658.	1845.
2	1692.	1668.	1640.	1612.	1635.	1644.	1635.	1606.	1647.	1622.	1654.
3	1655.	1644.	1607.	1619.	1621.	1601.	1619.	1623.	1633.	1635.	1639.
4	1652.	1651.	1653.	1630.	1633.	1619.	1626.	1635.	1627.	1630.	1634.
5	1657.	1663.	1642.	1599.	1612.	1595.	1610.	1618.	1598.	1626.	1663.
6	1645.	1645.	1634.	1624.	1620.	1621.	1620.	1620.	1607.	1596.	1611.
7	1635.	1634.	1627.	1636.	1624.	1647.	1637.	1638.	1615.	1606.	1607.
8	1634.	1631.	1599.	1616.	1598.	1621.	1619.	1620.	1597.	1603.	1603.
9	1649.	1654.	1636.	1622.	1613.	1614.	1612.	1612.	1606.	1604.	1604.
10	1648.	1649.	1636.	1622.	1614.	1613.	1611.	1611.	1607.	1604.	1604.

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	1710.	1702.	1681.	1659.	1673.	1701.	1673.	1664.	1683.	1681.	1736.
2	1702.	1694.	1671.	1647.	1664.	1671.	1664.	1645.	1673.	1664.	1680.
3	1684.	1676.	1648.	1649.	1651.	1636.	1651.	1653.	1662.	1664.	1668.
4	1680.	1679.	1675.	1659.	1659.	1649.	1655.	1660.	1655.	1657.	1660.
5	1683.	1684.	1670.	1633.	1642.	1624.	1639.	1647.	1629.	1651.	1665.
6	1673.	1674.	1664.	1653.	1649.	1649.	1649.	1648.	1637.	1626.	1638.
7	1664.	1662.	1655.	1660.	1651.	1664.	1662.	1660.	1644.	1635.	1635.
8	1663.	1660.	1633.	1646.	1629.	1649.	1648.	1648.	1629.	1631.	1631.
9	1676.	1677.	1665.	1651.	1641.	1642.	1640.	1640.	1634.	1632.	1631.
10	1675.	1675.	1665.	1651.	1642.	1641.	1639.	1639.	1635.	1632.	1632.

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	1727.	1718.	1699.	1673.	1689.	1733.	1690.	1664.	1696.	1689.	1769.
2	1724.	1707.	1688.	1649.	1682.	1684.	1675.	1645.	1677.	1648.	1682.
3	1700.	1694.	1652.	1667.	1673.	1641.	1667.	1673.	1679.	1677.	1680.
4	1705.	1704.	1697.	1681.	1685.	1673.	1679.	1684.	1677.	1677.	1679.
5	1711.	1713.	1689.	1644.	1665.	1631.	1660.	1668.	1637.	1662.	1686.
6	1703.	1702.	1692.	1678.	1674.	1670.	1674.	1673.	1658.	1632.	1645.
7	1693.	1692.	1682.	1688.	1675.	1693.	1687.	1687.	1665.	1657.	1656.
8	1690.	1684.	1643.	1670.	1642.	1670.	1674.	1672.	1644.	1654.	1655.
9	1707.	1711.	1688.	1680.	1666.	1669.	1668.	1667.	1659.	1658.	1657.
10	1706.	1706.	1694.	1680.	1669.	1669.	1667.	1666.	1661.	1658.	1658.

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	1735.	1728.	1706.	1677.	1696.	1732.	1692.	1669.	1695.	1680.	1755.
2	1729.	1716.	1695.	1657.	1688.	1689.	1680.	1650.	1680.	1650.	1679.
3	1709.	1702.	1660.	1674.	1680.	1650.	1674.	1679.	1684.	1679.	1682.
4	1715.	1715.	1706.	1691.	1695.	1682.	1689.	1693.	1686.	1683.	1684.
5	1723.	1724.	1705.	1651.	1674.	1638.	1668.	1679.	1643.	1669.	1688.
6	1716.	1716.	1704.	1689.	1685.	1681.	1684.	1684.	1665.	1637.	1651.
7	1705.	1704.	1693.	1699.	1687.	1702.	1699.	1697.	1677.	1664.	1663.
8	1702.	1698.	1652.	1681.	1649.	1682.	1685.	1685.	1652.	1662.	1663.
9	1719.	1719.	1704.	1692.	1675.	1679.	1678.	1678.	1668.	1666.	1666.
10	1719.	1719.	1707.	1692.	1679.	1679.	1677.	1676.	1670.	1667.	1667.

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	1743.	1736.	1714.	1687.	1704.	1752.	1700.	1674.	1705.	1686.	1783.
2	1741.	1724.	1702.	1654.	1696.	1696.	1687.	1648.	1685.	1647.	1683.
3	1717.	1710.	1655.	1681.	1689.	1646.	1681.	1688.	1692.	1686.	1688.
4	1725.	1724.	1717.	1700.	1706.	1691.	1698.	1704.	1694.	1691.	1692.
5	1733.	1736.	1710.	1652.	1682.	1636.	1676.	1687.	1642.	1675.	1701.
6	1725.	1725.	1713.	1699.	1694.	1689.	1694.	1693.	1673.	1637.	1656.
7	1715.	1714.	1703.	1711.	1696.	1715.	1708.	1710.	1685.	1673.	1671.

8	1712.	1706.	1650.	1691.	1650.	1690.	1694.	1693.	1652.	1671.	1672.
9	1729.	1732.	1713.	1702.	1685.	1689.	1688.	1687.	1677.	1676.	1676.
10	1729.	1729.	1717.	1702.	1688.	1688.	1687.	1686.	1679.	1677.	1676.

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	1754.	1746.	1725.	1691.	1713.	1745.	1707.	1682.	1707.	1691.	1758.
2	1747.	1734.	1713.	1669.	1706.	1706.	1695.	1665.	1692.	1661.	1689.
3	1728.	1721.	1677.	1694.	1701.	1669.	1694.	1699.	1703.	1695.	1697.
4	1737.	1736.	1726.	1714.	1717.	1705.	1711.	1715.	1707.	1702.	1703.
5	1745.	1746.	1723.	1672.	1696.	1655.	1689.	1700.	1660.	1684.	1703.
6	1739.	1738.	1727.	1713.	1708.	1701.	1706.	1706.	1686.	1652.	1666.
7	1729.	1728.	1717.	1722.	1710.	1724.	1720.	1720.	1697.	1685.	1683.
8	1725.	1719.	1672.	1706.	1670.	1702.	1707.	1706.	1672.	1683.	1684.
9	1742.	1742.	1728.	1716.	1698.	1702.	1701.	1701.	1690.	1688.	1688.
10	1742.	1742.	1730.	1716.	1702.	1702.	1700.	1699.	1692.	1689.	1689.

********* OIL SATURATION *********

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	.411	.710	.662	-.016	.324	.000	.079	.454	-.008	-.009	.001
2	.000	.497	.720	.498	.672	.253	.514	.637	.527	.439	.032
3	.557	.741	.658	.820	.749	.693	.791	.745	.807	.824	.676
4	.831	.711	.275	.656	.362	.666	.662	.329	.727	.815	.579
5	.649	.273	.570	.739	.698	.763	.799	.681	.729	.447	.000
6	.819	.678	.802	.717	.820	.636	.793	.698	.805	.673	.420
7	.834	.824	.741	.322	.637	.196	.596	.294	.662	.813	.783
8	.820	.687	.749	.682	.769	.634	.800	.692	.789	.820	.821
9	.660	.293	.620	.817	.824	.819	.824	.821	.821	.822	.821
10	.830	.655	.808	.828	.826	.826	.825	.825	.823	.822	.823

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	.368	.685	.644	.048	.293	.000	-.012	.410	.084	.006	.000
2	.108	.456	.694	.470	.662	.215	.490	.578	.491	.410	.000
3	.519	.713	.591	.833	.710	.642	.756	.698	.805	.817	.644
4	.833	.661	.021	.592	.169	.581	.582	.080	.664	.811	.555
5	.574	.004	.478	.689	.638	.727	.783	.601	.694	.425	.096
6	.805	.600	.777	.666	.815	.572	.770	.631	.790	.640	.394
7	.835	.815	.703	.129	.565	.028	.524	-.029	.577	.805	.772
8	.810	.610	.690	.609	.723	.561	.782	.618	.751	.820	.820
9	.586	.017	.528	.806	.823	.813	.825	.817	.820	.822	.822
10	.826	.579	.790	.828	.826	.827	.827	.826	.823	.823	.823

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	.336	.511	.572	.260	.318	.000	.054	.382	.148	.000	.000
2	.072	.459	.572	.502	.559	.233	.407	.496	.496	.364	.000
3	.472	.590	.570	.727	.633	.522	.598	.648	.690	.651	.493
4	.744	.655	.382	.587	.402	.554	.553	.379	.629	.690	.558
5	.623	.304	.480	.593	.599	.596	.652	.572	.598	.417	.000
6	.725	.567	.664	.647	.725	.529	.650	.591	.678	.529	.329
7	.760	.718	.700	.388	.572	.228	.514	.336	.545	.701	.643
8	.732	.594	.622	.604	.635	.527	.687	.594	.656	.751	.748
9	.645	.338	.517	.706	.744	.726	.765	.741	.745	.756	.757
10	.768	.636	.715	.761	.758	.761	.775	.763	.750	.757	.758

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	.022	.281	.414	.104	.117	.013	.046	.138	.053	.223	.000
2	.063	.187	.409	.361	.482	-.023	.274	.379	.330	.194	.000
3	.282	.430	.404	.613	.453	.392	.480	.467	.642	.623	.478
4	.634	.446	.027	.382	-.009	.370	.383	.009	.436	.610	.460
5	.399	.001	.151	.407	.414	.433	.491	.364	.461	.269	.007
6	.564	.331	.484	.425	.585	.321	.473	.355	.498	.434	.147
7	.658	.541	.518	.001	.335	.006	.265	.029	.295	.557	.635
8	.498	.314	.386	.382	.462	.301	.537	.371	.506	.713	.719
9	.267	.000	.109	.501	.636	.623	.689	.639	.691	.722	.727
10	.605	.271	.448	.625	.696	.716	.738	.722	.713	.724	.725

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	.165	.407	.476	.088	.215	.000	.003	.211	.002	.025	.001
2	.000	.312	.464	.419	.514	.096	.308	.400	.368	.198	.024

3	.371	.489	.452	.638	.508	.436	.512	.509	.663	.655	.541
4	.707	.528	.260	.492	.269	.450	.475	.235	.509	.628	.514
5	.556	.058	.371	.479	.495	.474	.540	.464	.492	.324	.008
6	.672	.480	.585	.539	.654	.392	.559	.461	.537	.455	.210
7	.732	.647	.619	.255	.459	.000	.415	.126	.422	.593	.670
8	.656	.449	.484	.497	.512	.400	.626	.486	.547	.731	.736
9	.554	.105	.395	.616	.693	.672	.737	.693	.718	.741	.745
10	.736	.550	.628	.721	.738	.745	.769	.751	.735	.743	.747

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	.084	.403	.477	.042	.187	.000	.004	.188	.000	.018	.000
2	.000	.263	.448	.382	.514	.068	.310	.391	.342	.194	.016
3	.346	.473	.422	.620	.449	.408	.495	.456	.661	.656	.547
4	.680	.485	.020	.417	.000	.367	.404	.000	.449	.617	.489
5	.426	.000	.248	.438	.422	.444	.517	.391	.467	.303	.000
6	.638	.420	.567	.478	.640	.363	.548	.416	.521	.445	.200
7	.721	.627	.560	.000	.379	.000	.353	.011	.354	.580	.668
8	.648	.418	.449	.421	.486	.363	.615	.431	.529	.728	.733
9	.478	.000	.315	.613	.693	.669	.736	.683	.712	.739	.741
10	.728	.475	.617	.723	.737	.742	.762	.746	.729	.739	.741

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	.019	.309	.391	.028	.157	.000	.002	.090	.000	.004	.000
2	.000	.218	.400	.350	.477	.005	.259	.338	.301	.084	.004
3	.298	.420	.365	.557	.421	.377	.444	.417	.591	.592	.501
4	.629	.443	.124	.430	.129	.388	.410	.081	.434	.553	.458
5	.494	.000	.239	.410	.427	.404	.470	.391	.427	.261	.023
6	.604	.401	.520	.462	.581	.313	.493	.378	.460	.397	.122
7	.664	.571	.553	.128	.391	.000	.335	.003	.347	.517	.603
8	.613	.388	.431	.434	.452	.316	.568	.419	.482	.669	.678
9	.542	.005	.346	.565	.630	.611	.685	.628	.651	.681	.688
10	.700	.542	.603	.677	.684	.688	.723	.697	.673	.685	.691

******** WATER SATURATION *********

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	.551	.246	.285	.960	.632	.999	.881	.491	.963	.973	.999
2	1.000	.455	.217	.445	.271	.700	.436	.299	.413	.494	.932
3	.391	.194	.271	.112	.205	.307	.183	.200	.128	.112	.261
4	.114	.234	.667	.278	.579	.284	.285	.621	.206	.120	.364
5	.299	.686	.368	.185	.228	.166	.130	.247	.190	.494	1.000
6	.123	.265	.135	.213	.112	.295	.137	.233	.118	.248	.514
7	.104	.114	.192	.619	.296	.766	.344	.664	.266	.112	.143
8	.118	.247	.169	.248	.152	.298	.131	.239	.128	.104	.104
9	.283	.660	.316	.116	.105	.111	.104	.108	.104	.104	.104
10	.115	.288	.129	.104	.104	.104	.104	.104	.104	.104	.104

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	.596	.278	.314	.951	.674	.999	.980	.544	.915	.994	1.000
2	.891	.501	.261	.478	.303	.742	.473	.362	.460	.514	1.000
3	.435	.237	.346	.121	.255	.356	.221	.254	.140	.119	.295
4	.120	.290	.928	.361	.784	.373	.367	.882	.271	.127	.393
5	.377	.996	.463	.241	.303	.210	.154	.332	.226	.525	.904
6	.139	.346	.162	.267	.119	.362	.161	.304	.134	.280	.547
7	.107	.125	.233	.817	.373	.972	.422	.995	.354	.122	.156
8	.129	.325	.221	.323	.191	.373	.151	.314	.154	.106	.106
9	.362	.943	.412	.129	.106	.118	.106	.114	.106	.105	.105
10	.124	.369	.151	.107	.106	.106	.105	.105	.106	.105	.105

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	.639	.456	.387	.688	.647	1.000	.912	.570	.815	1.000	1.000
2	.904	.505	.382	.446	.400	.720	.550	.448	.462	.595	1.000
3	.490	.367	.375	.224	.327	.459	.367	.301	.261	.306	.464
4	.217	.306	.573	.365	.553	.395	.392	.577	.321	.264	.400
5	.338	.666	.475	.346	.344	.337	.290	.375	.342	.541	1.000
6	.232	.393	.291	.302	.223	.420	.297	.360	.267	.413	.625
7	.194	.238	.250	.564	.377	.738	.441	.627	.403	.246	.302
8	.224	.359	.317	.344	.307	.423	.262	.355	.287	.194	.196
9	.314	.625	.438	.245	.204	.222	.182	.206	.200	.189	.187
10	.193	.324	.240	.190	.190	.187	.171	.183	.196	.188	.186

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	.976	.697	.551	.896	.854	.987	.954	.817	.947	.777	1.000
2	.937	.783	.546	.584	.479	.985	.678	.562	.629	.768	1.000
3	.686	.529	.537	.339	.496	.572	.471	.481	.317	.339	.489
4	.334	.523	.973	.576	.976	.566	.571	.990	.521	.353	.514
5	.578	.999	.811	.533	.534	.501	.454	.592	.485	.698	.992
6	.400	.636	.480	.530	.373	.638	.484	.607	.454	.512	.821
7	.302	.423	.436	.998	.624	.994	.702	.970	.662	.400	.323
8	.467	.647	.553	.574	.482	.657	.419	.588	.443	.242	.235
9	.708	1.000	.853	.460	.320	.335	.268	.318	.265	.232	.229
10	.362	.698	.515	.334	.262	.241	.217	.235	.242	.231	.228

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	.823	.572	.492	.868	.759	1.000	.997	.744	.998	.975	.999
2	1.000	.662	.496	.529	.450	.868	.648	.543	.595	.766	.975
3	.603	.475	.492	.318	.442	.529	.440	.443	.297	.306	.424
4	.267	.447	.706	.469	.699	.488	.483	.736	.450	.337	.455
5	.422	.925	.593	.462	.458	.458	.409	.494	.451	.642	.992
6	.299	.494	.383	.420	.308	.569	.403	.503	.417	.490	.753
7	.236	.323	.339	.712	.502	1.000	.553	.850	.537	.365	.288
8	.312	.514	.452	.462	.430	.559	.337	.475	.401	.226	.219
9	.422	.875	.570	.350	.265	.290	.223	.267	.239	.216	.213
10	.239	.425	.341	.243	.221	.214	.191	.209	.222	.214	.212

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	.907	.579	.494	.958	.791	1.000	.996	.770	.999	.982	1.000
2	1.000	.716	.513	.565	.451	.897	.649	.549	.622	.767	.983
3	.630	.492	.517	.338	.497	.553	.450	.501	.303	.307	.421
4	.296	.492	.980	.548	1.000	.570	.560	1.000	.515	.350	.485
5	.556	.999	.720	.500	.533	.485	.434	.570	.476	.667	1.000
6	.337	.558	.404	.485	.325	.602	.417	.551	.435	.500	.767
7	.251	.345	.400	1.000	.587	1.000	.620	.989	.609	.379	.293
8	.325	.549	.482	.539	.457	.601	.350	.535	.417	.232	.225
9	.502	1.000	.654	.356	.268	.295	.227	.281	.247	.222	.219
10	.250	.503	.356	.245	.227	.222	.201	.217	.231	.221	.219

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	.973	.678	.586	.972	.822	1.000	.998	.876	1.000	.996	1.000
2	1.000	.764	.566	.606	.495	.967	.707	.612	.669	.887	.995
3	.682	.551	.587	.408	.535	.573	.498	.547	.379	.379	.471
4	.354	.540	.851	.540	.848	.563	.558	.899	.536	.420	.519
5	.495	1.000	.731	.538	.534	.537	.487	.576	.525	.711	.977
6	.376	.580	.457	.506	.390	.658	.478	.594	.502	.555	.848
7	.313	.407	.414	.850	.580	1.000	.642	.997	.622	.449	.365
8	.363	.583	.512	.533	.499	.652	.402	.553	.474	.298	.287
9	.443	.980	.627	.410	.337	.360	.284	.342	.318	.284	.278
10	.283	.440	.374	.297	.286	.282	.246	.273	.294	.282	.277

********* GAS SATURATION *********

K = 1

	1	2	3	4	5	6	7	8	9	10	11
1	.037	.044	.053	.056	.045	.001	.041	.055	.045	.036	.000
2	.000	.048	.063	.058	.057	.047	.050	.064	.060	.068	.037
3	.052	.065	.071	.068	.045	.000	.026	.055	.065	.064	.062
4	.056	.056	.059	.067	.058	.050	.053	.050	.068	.065	.057
5	.052	.041	.062	.077	.074	.071	.071	.072	.081	.058	.000
6	.057	.058	.063	.069	.068	.068	.070	.068	.076	.078	.066
7	.061	.062	.067	.060	.068	.039	.059	.043	.071	.075	.074
8	.062	.066	.081	.070	.079	.068	.069	.069	.083	.076	.074
9	.057	.047	.064	.067	.072	.070	.072	.071	.075	.074	.075
10	.055	.057	.063	.068	.070	.070	.071	.071	.073	.074	.073

K = 2

	1	2	3	4	5	6	7	8	9	10	11
1	.036	.036	.042	.000	.033	.001	.031	.046	.001	.000	.000
2	.001	.043	.045	.052	.035	.043	.037	.061	.050	.076	.000
3	.045	.050	.063	.046	.035	.002	.023	.048	.055	.064	.061
4	.047	.048	.051	.048	.047	.046	.051	.039	.065	.062	.051
5	.049	.000	.058	.070	.059	.063	.064	.067	.080	.050	.000
6	.056	.054	.061	.067	.067	.066	.069	.065	.076	.080	.059
7	.059	.060	.063	.054	.063	.000	.054	.033	.069	.073	.072

8	.061	.064	.089	.068	.086	.066	.067	.068	.095	.074	.074
9	.052	.040	.060	.066	.070	.068	.069	.069	.074	.072	.073
10	.050	.051	.060	.065	.068	.067	.068	.069	.071	.072	.072

K = 3

	1	2	3	4	5	6	7	8	9	10	11
1	.025	.032	.041	.052	.035	.000	.034	.048	.037	.000	.000
2	.024	.036	.046	.052	.041	.047	.043	.056	.042	.041	.000
3	.038	.044	.055	.049	.040	.020	.035	.051	.049	.043	.043
4	.039	.039	.046	.048	.045	.051	.055	.044	.050	.046	.042
5	.039	.031	.045	.061	.057	.067	.059	.053	.060	.042	.000
6	.043	.040	.045	.051	.052	.051	.052	.049	.055	.058	.046
7	.046	.044	.050	.048	.052	.035	.045	.038	.052	.053	.055
8	.044	.047	.061	.052	.058	.050	.051	.051	.057	.056	.056
9	.041	.037	.045	.049	.052	.052	.053	.053	.055	.055	.056
10	.039	.040	.045	.050	.053	.052	.053	.054	.054	.055	.056

K = 4

	1	2	3	4	5	6	7	8	9	10	11
1	.001	.023	.035	.000	.030	.000	.000	.044	.000	.000	.000
2	.000	.029	.045	.055	.039	.039	.048	.059	.041	.038	.000
3	.031	.041	.058	.048	.051	.036	.049	.052	.040	.038	.033
4	.032	.031	.000	.043	.033	.063	.046	.001	.043	.036	.026
5	.023	.000	.038	.060	.052	.066	.055	.044	.054	.033	.001
6	.036	.033	.036	.045	.042	.041	.043	.038	.048	.054	.032
7	.040	.036	.046	.000	.041	.000	.033	.001	.043	.044	.042
8	.035	.039	.061	.044	.056	.042	.044	.041	.051	.045	.046
9	.025	.000	.038	.038	.044	.042	.043	.042	.044	.045	.044
10	.033	.031	.037	.041	.043	.043	.045	.043	.045	.045	.047

K = 5

	1	2	3	4	5	6	7	8	9	10	11
1	.011	.022	.033	.044	.026	.000	.000	.045	.000	.000	.000
2	.000	.026	.041	.051	.036	.036	.044	.057	.037	.036	.001
3	.026	.036	.057	.044	.049	.035	.048	.048	.039	.038	.034
4	.026	.026	.034	.039	.032	.062	.042	.029	.040	.035	.031
5	.022	.017	.036	.060	.047	.068	.050	.042	.057	.034	.000
6	.028	.026	.032	.041	.038	.039	.039	.036	.046	.055	.037
7	.032	.030	.042	.033	.039	.000	.032	.023	.042	.043	.042
8	.032	.037	.064	.042	.057	.041	.038	.039	.052	.043	.045
9	.024	.020	.035	.034	.042	.038	.040	.039	.043	.043	.042
10	.025	.025	.031	.036	.041	.040	.040	.040	.043	.042	.042

K = 6

	1	2	3	4	5	6	7	8	9	10	11
1	.009	.018	.029	.000	.022	.000	.000	.042	.001	.000	.000
2	.000	.021	.038	.053	.035	.035	.041	.060	.035	.040	.001
3	.024	.035	.061	.042	.054	.038	.055	.043	.035	.036	.032
4	.024	.023	.000	.035	.000	.063	.036	.000	.036	.032	.027
5	.018	.001	.032	.061	.045	.071	.049	.038	.057	.031	.000
6	.025	.022	.029	.037	.035	.035	.035	.032	.044	.055	.033
7	.028	.028	.039	.000	.034	.000	.027	.000	.037	.041	.039
8	.027	.034	.069	.040	.057	.036	.035	.034	.054	.041	.042
9	.020	.000	.031	.031	.040	.036	.037	.036	.040	.039	.040
10	.022	.022	.027	.033	.036	.036	.037	.037	.039	.040	.040

K = 7

	1	2	3	4	5	6	7	8	9	10	11
1	.008	.012	.023	.000	.020	.000	.000	.034	.000	.000	.000
2	.000	.018	.034	.045	.028	.028	.035	.049	.030	.029	.000
3	.020	.029	.048	.035	.044	.050	.058	.037	.030	.030	.027
4	.017	.017	.024	.029	.023	.049	.031	.020	.031	.027	.023
5	.011	.000	.029	.052	.039	.060	.043	.033	.048	.028	.001
6	.020	.018	.023	.032	.029	.030	.029	.027	.038	.048	.029
7	.023	.022	.033	.022	.030	.000	.023	.000	.032	.035	.033
8	.024	.029	.057	.033	.049	.032	.030	.028	.044	.033	.035
9	.015	.015	.027	.025	.033	.030	.030	.031	.031	.035	.035
10	.017	.018	.023	.026	.030	.030	.032	.030	.033	.033	.033

********** END OF SUMMARY REPORT **********

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* TIME STEP SUMMARY *

E STEP	PRODUCTION					INJECTION		PV WT AVG	MATERIAL BALANCES			MAX SATN CHANGE				MAX PRES CHANGE				ITN
	OIL	GAS	WATER	GOR SCF/	WATER /OIL	GAS	WATER	RES PRES	OIL %	GAS %	WATER %	I	J	K	DSMAX	I	J	K	DPMAX	O
. DAYS	STB/D	MSCF/D	STB/D	STB	RATIO	MSCF/D	STB/D	PSIA												
3650.	1072.0	576.8	4635.4	538.1	4.3	.0	-6221.	1668.	-.004	-.003	.000	2	9	7	.001	2	2	2	.15	1

*** BOAST II (RELEASE 1.1) SIMULATION TERMINATED ***