

SIETE OIL & GAS CORPORATION

BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
SIETE OIL & GAS CORP. EXHIBIT NO. 12
CASE NO. 10618 and 10619

PARKWAY (DELAWARE)
WATERFLOOD
UNITIZATION PROPOSAL

SUMMARY

1. The proposed Parkway (Delaware) Flood reservoir was discovered in August, 1988, and currently includes 22 producers and one shut-in well. The limits of the field have been defined by drilling.
2. The Delaware reservoir is found at an average depth of 4100 feet and consists of fine-grained sandstone and shale. Net pay thickness averages 133 feet and porosity averages about 17%. The trap is a combination structural-stratigraphic trap. Productive limits are controlled by porosity distribution and down-dip water.
3. The field's cumulative oil production through 1992 is 1282 MBO, and the remaining primary reserves are estimated at 2815 MBO. The ultimate primary production is expected to reach 4110 MBO, or 5.8% of the original oil-in-place.
4. Based on the waterflood model, a secondary-to-primary ratio of 1.55:1 is anticipated for the Parkway Delaware Field. Secondary reserves are estimated at 6370 MBO, or 9.0% of the original oil-in-place. Figure 26 shows the anticipated reserve and production increase.

5. The investment required to implement a fieldwide waterflood totals \$3,365,000.
6. The Parkway (Delaware) Waterflood can be expected to generate undiscounted net cash of \$85,329⁰⁰⁰ (\$16,912,000 when discounted at 15%) for a 100% Working Interest and 75% Net Revenue Interest. The Discounted Cash Flow Return on Investment is 51% and the payback period is 3.7 years.

CONCLUSIONS

The following conclusions are based on the data analysis of the A and B Sands and the detailed reservoir engineering analysis of the C Sand.

1. An increase in ultimate oil recovery can be expected if the field is waterflooded.
2. Estimated primary recovery is 4,110,000 STB or 5.8% of the initial oil-in-place.
3. A waterflood on a 5-spot pattern with infill drilling will result in the maximum ultimate recovery.
4. The initial oil-in-place in the C Sand is 31,250,000 STB and 16,211,100 MCF of gas.
5. An incremental recovery of 4,525,000 STB can be realized by waterflood from the C Sand, if nine wells are drilled as injectors.
6. The ultimate recovery can be increased if the reservoir is produced to a 95% water-cut. The waterflood run was terminated at year 2016. The predicted water-cut at that time was 90%.

7. The estimated initial oil-in-place in the A Sand is 11,428,000 STB and the B Sand oil-in-place is 27,919,600 STB.
8. An incremental recovery of 1,845,000 STB can be realized by waterflood from the A and B Sands, if nine wells are drilled as injectors.
9. The reservoir drive mechanism for Sand A, B and C is solution gas drive.

RECOMMENDATIONS

1. A waterflood pilot project should be undertaken in the better part of the reservoir. Based on the results of the pilot, the waterflood should be expanded to the entire reservoir.
2. Pressure build-up surveys should continue every six months. In addition, TDT logs should be run on some of the wells prior to the start of waterflooding and as the project progresses. This will be useful in monitoring the flood performance and in the determination of unswept regions for possible infill drilling of producing wells.
3. At the start of injection, the water injection rate should be kept at or above 140% of the reservoir voidage in order to increase reservoir pressure and reduce gas saturation. After fill-up, the injection rate should be kept between 100% and 110% of total reservoir voidage so oil will not be bypassed due to high injection rates.
4. Step rate tests should be performed on each injection well and water injection should occur below the formation parting pressure. This will determine the final rates of injection.

5. It is recommended the field be waterflooded using 40-acre five-spot patterns.
6. It is recommended OCD approval be granted for this project.

DISCUSSION

The Parkway (Delaware) Field is located in Sections 26, 35 and 36 of Twp. 19 South, Rge. 29 East and Section 2, Twp. 20 South and Rge. 29 East, Eddy County, New Mexico (Figure 1). The field produces primarily from three locally segregated sandstones contained within the Delaware Mountain Group.

Development

The discovery well for the Parkway (Delaware) Field was the Parkway State #36-1, drilled by Santa Fe Energy in early 1987. In July and August of 1988, Siete Oil & Gas Corporation drilled and completed the Osage Federal #1 well. The well was completed flowing 125 BOPD, 153 MCFGPD and 175BWPD. The well set off the development drilling program that has defined the current boundaries of the Parkway (Delaware) Field. In addition to Siete, the field has been developed by Santa Fe Energy, Meridian Oil Company, and Strata Production. A total of 23 wells were drilled, the last being the Siete Flathead State #1 in September 1990. The field is currently producing 1169 BOPD, 2 MCFGPD and 732 BWPD. As of May, 1992, the field has produced 1.3 million barrels of oil, 2.4 billion cubic feet of gas, and 818 thousand barrels of water. The ultimate primary recovery for the field is 4.1 million barrels of oil.

The production and pressure performance indicates

that drive mechanism in all the sands is solution gas drive. The initial pressure and estimated current pressure in the C Sand is 1835 psia and 1487 psia, respectively. The C Sand producing gas-oil-ratio has increased from an initial gas-oil-ratio of 480 SCF/STB to the current gas-oil-ratio of 2800 SCF/STB.

The A Sand initial pressure is 1743 psia with an estimated current pressure of 1241 psia. The producing gas-oil-ratio has increased from an initial gas-oil-ratio of 460 to the current gas-oil-ratio of 2100 SCF/STB.

The estimated initial pressure in the B Sand is 1772 psia. The producing gas-oil-ratio has increased from the initial of 470 SCF/STB to the current producing gas-oil-ratio of 2500 SCF/STB.

In the Data Analysis phase of this study, data from Sand A, B, and C were analyzed in detail. It was recommended performing a detailed study of only the C Sand, due to its continuity, better permeability and thickness. A detailed reservoir engineering study of the C Sand was performed. The objective of the study was to investigate the effects of water injection on the ultimate oil recovery of the C Sand. A black oil simulation model was used for this study.

Geology

The Parkway (Delaware) Field is a combination structural-stratigraphic trap of the upper portion of the

Delaware Mountain Group clastics. The areal extent of the oil production portion of the field is slightly larger than one square mile. Stratigraphy plays an important role in the Parkway Field in that locally the Delaware Sand interval is effectively divided by impermeable dolomitic shale barriers into three separate sand reservoirs, the A, B and C.

Exhibit 1 is a display of electric log segments from the Siete Osage Federal #1 well. They show the local subdivisions of the Delaware Sands into the three aforementioned sands. Two cross-sections, Exhibits 2 and 3, have also been included to illustrate the lateral continuity of these sands and to substantiate the homogeneity of the reservoirs. The correlative well log tops for each of the Delaware A, B and C Sands were chosen by the Parkway Delaware Committee and independently verified by Michael G. Clemenson, Petroleum Geologist. Mr. Clemenson was retained by Platt, Sparks & Associates, Inc., engineering consultants.

The primary pay sand in the Parkway (Delaware) Field is the Delaware C Sand. The Delaware C Sand is a massive sand body with an overall average gross thickness of approximately 120 feet. Compositionally the sand is a fine-grained, quartz sand with porosity averaging 17% throughout the field. The average permeability is 3.2 md and the average oil and water saturations are 47% and 43% respectively.

The top of the Delaware C Sand occurs at a subsea depth of -793 to -925 feet in the productive wells on the Parkway structure. Exhibit 4 is a structure map on top of the Delaware C Sand. It demonstrates the structural component of the trap being four-way closure. Exhibit 5 is a net pay isopach of the C Sand. Net pay was determined using the following log analysis cutoff: porosity = 14%, water saturation = 55%, and shale volume = 50%. The net isopach map demonstrates that the reservoir quality C Sand is localized within the boundaries of the proposed unit and serves to demonstrate the stratigraphic component of the trap. These two maps along with the previously mentioned cross-sections show the Delaware C Sand to be of limited extent, but laterally continuous and homogeneous. Exhibit 6 is an east-west cross-section that shows the separation of reservoirs within the proposed unit from that of the Eastland Oil Company Delaware Sand production to the east.

The top of the Delaware B Sand occurs at a subsea depth of approximately -655 to -831 feet in productive wells on the Parkway structure. The average gross thickness of the B Sand is 148 feet. The average net thickness of the B Sand was determined using log analysis cutoff parameters of porosity greater than 15% and shale volume less than 50% is 85 feet. The Delaware B Sand has an average net pay thickness of 50 feet based on log analysis cutoff parameters of 15% porosity, shale volume less than 50%, and water saturations less than 55%. The B Sand is separated

from the C Sand by 5 to 20 feet of dolomitic shale. Nine wells in the Parkway Field have been perforated in the B interval.

The top of the Delaware A Sand occurs at a subsea depth of approximately -590 to -700 feet in productive wells on the Parkway structure. The average net thickness of the A Sand using log analysis cutoff parameters of porosity greater than 15% and shale volume less than 50% is 40 feet. The Delaware A Sand has an average net pay thickness of 21 feet based on log analysis cutoff parameters of porosity greater than 15%, shale volume less than 50%, and water saturations less than 55%. The A Sand is separated from the B Sand by 5 to 17 feet of shale. Eight wells in the Parkway Field have been perforated in the A Sand.

Although the Delaware C Sand is the first sand that is to be flooded, the B and A Sands are considered viable as well. They are depositionally the same as the C Sand. Compositionally the B and A Sands are the same and they are laterally continuous and homogeneous throughout the field as is the C Sand. Maps for the B and C Sand can be found in Attachment 2 of the Platt, Sparks & Associates study which has been provided.

Well Log Analysis

A detailed well log analysis was performed on 27 wells in the Parkway (Delaware) Field. Each well was analyzed on the half-foot basis to relate well log and core data

in order to determine net pay thickness, average porosity and average water saturation. The results of the well log analysis was used by the geologist to construct isopach maps on net sand, net pay and permeability which were utilized in the reservoir analysis of the field.

Basic Data and Average Reservoir Properties

The average porosities, water saturations and net thickness were calculated from detailed well-log analysis. The horizontal permeability ranges from approximately 2 md to 8 md. The calculated permeabilities from the correlations were compared to permeability determined from pressure buildup analysis for consistency from three wells in the field.

Tabular data for all well log analysis such as average porosities, water saturation and net thickness can be found in Appendix A of the Platt, Sparks study. Results of calculated reservoir properties for the A, B and C Sands are summarized in Tables 6, 7 and 8 respectively of Attachment 3. Individual well log analysis and reservoir properties for the A, B and C Sands in all wells can be found in Tables 9, 10 and 11.

Completions

The wells in the Parkway (Delaware) Field typically have 13-3/8" casing set at 350', 8-5/8" casing set at 3200', and 5-1/2" casing set at total depth. Cement is circulated

behind all strings. Most wells are pumped using 3/4" steel rods and 114D pumping units. The pumping units will be undersized once fluid rates exceed 200 BPD. At that time larger units will be installed.

The Delaware wells were fracture stimulated before producing oil and gas. These stimulations ranged in size from 15,000 gallons to 40,000 gallons and 35,000 pounds to 187,000 pounds of sand.

The completion data for each well is shown in Attachment #1 of the Platt, Sparks report.

Reservoir Hydrocarbon Fluid Properties

Laboratory reservoir fluid properties studies are available on the Osage Federal #2. The fluid sample was taken January 29, 1991, when the reservoir pressure was 1337 psig; compared to the initial reservoir pressure of 1817 psig. Therefore, the reservoir fluid composition at the time the sample was taken does not represent the composition of the fluid at initial reservoir conditions. Also, an equation of state PVT program was used to determine the fluid composition and PVT properties at initial reservoir conditions. The resulting initial solution gas and oil formation volume factor are consistent with reservoirs of similar depth and API gravity. The flash PVT data used in this study is at a separator pressure of 36 psia and temperature of 113 degrees F. The resulting PVT properties used in this study are shown in Figures 2, 3 and 4.

Relative Permeability Data

The laboratory drainage water-oil and gas-oil relative permeability data for the Longknife Federal #1 were used as the initial values for the study. During the history match phase, the relative permeability data was one of the reservoir parameters that had to be adjusted to match actual well performance. The end point of each relative permeability curve is controlled by the residual oil saturation. Though the shape of the laboratory relative permeability data were adjusted, the laboratory derived end-point data was used in this study. The residual oil saturation to water is 26% and residual oil saturation to gas is 32%. For the final history match, two different sets of relative permeability data were used to match the historical performance. This is due to the variation of petrophysical properties across the field. The resulting relative permeability relationships that were used in the study are shown in Figures 5 and 6.

Capillary Pressure Data

The laboratory pressure versus water saturation relationships from the Longknife Federal #1 were used as the initial values. This capillary pressure data was used to initialize the reservoir model, but resulted in a higher water transition zone than actually was seen in the wells. Therefore, the laboratory data was adjusted to match the

calculated water saturation profile and to match well performance. In addition, when the capillary pressure relationship for the downstructure wells was used for the upstructure wells, the calculated water saturation for the updip wells was too high. The reason for this is discussed below in the next section. Two sets of capillary pressure versus water saturation relationships were used in the study. The capillary pressure data for the upstructure locations is shown in Figure 6 and the data for the down structure positions are shown in Figure 5.

Relative Permeability and Capillary Pressure Data Versus Structural Position

The C Sand permeability generally decreases going from the upstructure to the downstructure positions (the edge of the reservoir). The laboratory relative permeability and capillary pressure data was measured from a core taken from a downstructure well. It is felt that this data does not represent wells located in the higher permeability area of the reservoir, namely those wells upstructure. Wells located in the lower permeability area of the reservoir are expected to have a higher capillary pressure effect, hence, higher water saturation transition zones than the wells located in the higher permeability area of the reservoir.

Relative permeability is mainly a function of pore size distribution and fluid saturations. Therefore,

different parts of the field with different rock properties will likely have different relative permeability data. The use of two different capillary pressure and relative permeability data is not unreasonable and was necessary in order to obtain a reasonable history match.

Production Data

The reported monthly oil production data was assigned to historical data of each well for the history match phase of the study. The wells are produced as a lease; therefore, the production data reported for each individual well data is based on production allocation between wells on the lease. Seventeen of the wells in the field initially produced only from the C Sand, three wells were initially produced only from B Sand and one well produced in the A Sand. In some of the wells additional perforations were added in the A and B Sands later in the life of the wells. In addition, due to the fracture stimulation, some of the wells have communication in all the sands in the wellbore. The reported well producing gas-oil-ratio and water-cut data were erratic; therefore, the reported data was smoothed out for use in comparison with the simulation results. Production allocation, rework of wells, erratic production data and communication between the A, B and C Sands in the wellbore due to fracture stimulation resulted in some difficulty in matching the actual performance of some wells in the reservoir modeling phase. The production history

graphs and tables for the individual sands are shown in Attachment 1 of the Platt, Sparks report. Individual well production graphs and tables with reported and smoothing of the producing gas-oil-ratio and water-cut are also included in Attachment 1. The producing gas-oil-ratio and water-cut performance were evaluated to determine if a correlation existed between water-cut performance and structural location and sand quality. From this analysis it was established that the water-cut increased with structural position and reduction in sand quality.

Pressure Analysis

The available static pressure and pressure buildup tests were analyzed to determine the average reservoir pressure to be used in the material balance calculations. In addition, permeability thickness and skin factor data were obtained from the pressure buildup analysis. The detailed pressure build-up analysis procedure is shown in Appendix B of the Platt, Sparks report. These pressures do not represent the average reservoir pressure, but the pressures in the well drainage area. This is due to the variation in sand quality and total withdrawal across the field. The available pressure data are from wells located in the area of high withdrawal and relatively good sand quality. The summary of the reservoir pressure is shown in Figure 7 for the C Sand and Figure 8 for the A Sand. The initial pressure in the C Sand is 1838 psia at -875

feet subsea. The estimated initial reservoir pressure is 1743 psia at -653 feet subsea for the A Sand and 1772 psia at -720 feet subsea in the B Sand.

Volumetric Reserve Calculations

The calculated volumetric oil-in-place for the C Sand is 27,869,250 STB. For the A and B Sand, the calculated oil-in-place is 27,919,600 STB and 11,428,000 STB, respectively. The summary of the volumetric oil and gas-in-place with the reservoir parameters used is shown in Figures 9 through 12. The structural interpretation and net isopach maps are the basis for the determination of the bulk-volume in each of the sands. The average porosity and water saturations were determined from the results of the detailed well-log analysis. The OOIP on the Data Sheet (Figure 24) reflects A & B volumetric reserves plus 31,250,000 STB for the C Sand. This is based on the results of the model and is expanded upon in the simulation discussion.

Primary Recovery

Ultimate primary reserves from all three sands is estimated to be 4110 MBO. This is based on the computer generated results for the C Sand plus volumetrics and decline curve analysis for the A & B Sands. The total primary recovery is 5.8% of the OOIP, 70,598 MBO. Recoverable primary reserves for each well is presented in the "Unitization" Section of this report.

RESERVOIR SIMULATION - C SAND

Reservoir Model Description

A three-phase, three-dimensional black oil reservoir simulation model was used to study the producing characteristic of the C Sand. The structure and isopach maps, petrophysical, reservoir fluid properties and production data previously discussed were used for the simulation study. The simulation input data, initialization procedure, reservoir characterization procedures, prediction cases and simulation results will be discussed.

Input Data

A 28 x 24 rectangular grid with three layers was used to model the reservoir. The simulation grid layout is shown in Figure 13.

The structure on top of the C Sand and the gross thickness maps for the C Sand were digitized for use in the simulator. In addition, the net thickness maps and the isopermeability map were digitized for use in the simulator. A constant porosity of 17.5% and an initial reservoir pressure of 1838 psia at -875 feet were used for initialization of the model. The model was initialized using an oil-water contact of -1135 feet.

The results of well permeability-thickness and skin factor from the analysis of available pressure buildup data were used in the model to calculate the productivity

index of each well. When not available, the well grid block permeability and perforated thickness was used to calculate the productivity index. The well permeability thickness and skin factor are reservoir parameters modified to match performance due to the uncertainty of the effect of fracture stimulation on the effective perforated thickness. The summary of the data used to initialize the model is shown in Figure 14.

Initialization of the Model

The model is initialized to determine the reservoir pressure, saturations, pore volume, permeability distribution and fluids in place at original reservoir conditions. The results of the initialization are tabulated below:

Average Reservoir Pressure	1858 psia
Pore Volume	79,135,542 RB
Initial Oil-in-Place	31,246,930 STB
Free Gas-in-Place	1,192,718 MCF
Solution Gas-in-Place	15,018,351 MCF

The oil-in-place is 27,869,250 STB from volumetric calculations compared to 31,246,930 STB from reservoir simulation results. The difference in results is due to the following:

1. Localized increase in the pore volume to match reservoir performance.
2. The calculated oil-in-place from the simulation is based on the sum of the oil in place in the

individual grid cells. The oil-in-place in each grid cell is based on the average reservoir properties in the cell as opposed to using a single average porosity and average water saturation in the volumetric oil in place calculation.

Reservoir Characterization

The average daily oil production rate was input into the reservoir model. The producing gas-oil-ratio, water cut and individual well reservoir pressure were history matched. The producing gas-oil-ratio and water-cut had to be smoothed for comparison with the reservoir simulation history match. Initially an attempt was made to history match gas-oil-ratio and water-cut data for each well, However, using the laboratory reported relative permeability and capillary pressure data resulted in a higher calculated producing gas-oil-ratio and water-cut than the reported or smoothed data for each well. Adjusting the relative permeability data resulted in a better match as to the time of initial free gas production, but did not improve the match of water-cut. To adequately match the water-cut behavior, the laboratory capillary pressure was reduced. This resulted in a better match to water-cuts in the downdip wells, but not in the updip wells. After further analysis of petrophysical and geological data, it was postulated that different relative permeability and capillary pressure

relationships should be used for different parts of the field. Using a lower capillary pressure for the updip wells resulted in a better match to the actual water-cut.

In order to match the producing gas-oil-ratio in some of the wells located downdip and on the edge of the field, the reservoir horizontal and vertical permeability was adjusted, but with little improvement on the match. The pore volume was then increased in order to improve the match of the producing gas-oil-ratio performance of these wells.

In the history match phase of the study, more importance was given to closely matching the individual well reservoir pressures as measured during 1991. This is because this data can be analyzed and the duration of shut-in time can be verified. For comparison with actual measured pressures, the wells were shut-in in the simulator for the same duration as in the field. The results of the well reservoir pressure match is shown in Figure 15.

The results of the history match is presented in much greater detail in Attachment #4 of the Platt, Sparks report.

Future Prediction Cases

Future prediction cases for primary depletion and waterflood were analyzed. The results of the prediction runs are given in each prediction case attachment.

For the primary depletion cases, the wells were limited by an oil or gas allowable of 80 BOPD and 160 MSCFD. The

limiting flowing bottomhole pressure used is 200 psia assuming the wells are pumped off. An economic limit of two BOPD or a water-cut of 95% per well was used.

In the waterflood case, the wells were limited by an oil or gas allowable of 80 BOPD and 160 MSCFD until fill-up. After fill-up, the wells were produced at capacity without a gas limit. Each individual well's production rate is proportional to the well's productivity index relative to the total productivity index of all of the production wells. A maximum total liquid production rate of 500 BFPD per well was used.

A limiting bottomhole injection pressure of 2600 psia was used for each injection well. The limiting bottomhole injection pressure was determined from the fracture gradient in the area of .065 psi per foot with a safety factor of 100 psi. The maximum injection rate per well is 1000 BWPD. This injection rate constraint was calculated from a limiting surface injection pressure of 1000 psi and 2600 psi limiting bottomhole injection pressure. Before reservoir fill-up the total injection rate is limited to 1.40 of the reservoir voidage. After fill-up the injection rate is 1.0 of the reservoir voidage rate due to the reduction in injectivity as a result of increasing reservoir pressure. Each individual well's injection rate is proportional to the well's productivity index relative to the total productivity index of all the injection wells.

Once history was matched, we felt confident about

extrapolating primary reserves for the C Zone and making waterflood prediction runs. Many scenarios were examined to determine the most economically viable plan. These are expounded upon in the Platt, Sparks Report in Attachments 6 through 15.

Case #10 in Attachment 15 most closely matches our waterflood plan. It is a 20-acre infill drilling program in the heart of the field. It involves drilling ten wells and converting three producers. The final plan we are going to use will drill nine wells and convert five.

A detailed analysis of each proposed pattern is in the Platt, Sparks Report and will not be covered in this report.

PLAN OF OPERATION

Fieldwide Waterflood

It is planned to waterflood the Parkway (Delaware) Field using 40-acre, five-spot patterns. Water will be from three sources: (1) Parkway Delaware produced brine; (2) produced brine from the Tuesday Federal SWD; and (3) produced brine from shut-in wells in the area. These waters have been analyzed and shown to be compatible (see C-108).

The Bureau of Land Management and Oil Conservation Division must grant approval for water injection in the Parkway Delaware before the waterflood can be initiated. Since water injection will likely push oil from one lease to another, it is recommended that the field be unitized prior to the start of water injection. A discussion of unitization is included later in this section.

Water Requirements and Sources

The maximum daily water requirement for the proposed flood is estimated to be 4900 BWPD for the first year. All the produced water in the Parkway (Delaware) Field will be reinjected. However, makeup water will be required throughout the life of the field to maintain pressure. Anticipated water injection rates are shown in Figure 16.

Well Conversions

Figure 17 shows those wells selected for conversion

to water injection for the Parkway (Delaware) Field. The conversion wells were selected by choosing the pattern which would position most low rate or edge wells as injectors. The 40-acre pattern size requires the conversion of five producers to injection, drilling nine injectors, and leaving 18 active producers in the Unit. The pumping wells currently have 114D pumping units on them. As fluid volumes increase, larger units will be installed.

The cost estimate for converting an existing producer is \$30,000/well (Figure 18). Three wells will need the existing perms squeezed. The total cost for converting five wells is \$255,000 (Figure 19)

Facilities

The facilities investment required for implementation of a fieldwide waterflood total \$230,000 and is itemized in Figure 19. Figure 20 shows the injection system. In order to conserve capital, it is intended to make use of as much of the materials on hand as possible. The production facilities will take advantage of existing production headers and well test equipment. Transfer pumps will be standardized as much as possible for ease of maintenance and repair. Oxygen scavenging, gas blankets and filtering will be provided for the injection water to minimize corrosion and injection well plugging.

Economic Analysis

The economic analysis of the proposed waterflood project

(Figure 25) involves four economic cases. Case #1 is the project under continued operations. Case #2 evaluates the incremental waterflood reserves from only the C Sand and is implemented in 1993. Case #3 evaluates the incremental reserves from the A and B Sands when they are opened in 1996. Case #4 is the total incremental evaluation of all three sands over the life of the waterflood.

A total capital investment of \$3,819,000 will generate a discounted net cash flow of \$26,800,000 (discounted at 10%) and add gross incremental oil reserves of 6370 MSTB. A Working Interest of 100% and Net Revenue Interest of 75% were used in the economics. Oil and gas prices of \$20/Bbl and \$1.60/MCF were used, respectively. The total incremental Rate of Return before taxes discounted at 10% is 51% and has a 3.7 year payout.

UNITIZATION

Unit Area

The Proposed Unit is comprised of eleven tracts with different working interest, royalties, and overriding royalties. The legal description, size, royalty owner, overriding royalty owner, and working interest ownership for each tract are given in Exhibit B. The proposed secondary recovery unit area (boundary) of the Parkway (Delaware) Unit is shown in Figure 17.

Equity Parameters

Unitization parameters are based on an engineering study conducted by Platt, Sparks & Associates. Detailed reservoir simulation was performed on the C Sand and this information was applied to the A and B Sands.

Each sand has several parameters used to determine each well's part in the Unit. These parameters were agreed upon by Meridian, Santa Fe Energy, and Siete Oil & Gas Corporation.

1.	Recoverable Oil Reserves	40%
2.	Remaining Oil Reserves	35%
3.	Usable Wellbores	5%
4.	Recoverable Gas Reserves	10%
5.	Remaining Gas Reserves	10%

Each sand as a whole is also considered to have a different percentage of the Unit. This percentage is based

on each sand's recoverable oil reserves and is as follows:

A Sand	1,051,585 Bbls	25.66%
B Sand	137,938 Bbls	3.37%
C Sand	<u>2,908,659 Bbls</u>	<u>70.97%</u>
Total	4,098,182 Bbls	100.00%

The Unit is divided into 11 tracts based on common working and revenue interests.

A SAND -- Based on completion and recompletion data, eight wells contain a productive A Sand interval. These wells are:

	<u>Recoverable Oil Reserves</u>	<u>Analysis Method</u>
Apache A-1	240,735 Bbls	Decline Curve
Apache A-2	195,000 Bbls	Volumetric
Apache 2	158,559 Bbls	Volumetric
Renegade 1	9,609 Bbls	Decline Curve
Renegade 2	201,399 Bbls	Volumetric
Osage 1	204,000 Bbls	Volumetric
Parkway 36-2	1,116 Bbls	Decline Curve
Parkway 36-6	<u>41,167 Bbls</u>	Decline Curve
Total	1,051,585 Bbls	

The B Sand reserves allocated in the Platt, Sparks report for the Parkway 36-2 and 36-6 were included in the A Sand. Based on the poor B Sand performance in the 36-7, it is felt that the incremental oil for the 36-2 and 36-6 is from the A Sand. This becomes more apparent considering the good performance of the 36-6 which offsets Meridian's

successful Apache A-2 recompletion.

The volumetric analysis was based on the Apache A-1 recovery. This is an isolated A Sand producer with enough history to perform decline analysis. This well will ultimately produce 240,735 Bbls which is 17% of the OOIP. This recovery factor was then applied to the other structurally equivalent wells with A Sand potential.

Due to the lack of production history, the Apache 2 reserves were calculated volumetrically. Based on the IP of this well, a decline rate of 37% is necessary to recover the calculated volumetric reserves.

B SAND -- Based on completion and recompletion data, six wells were allocated B Sand reserves. Two wells, Osage #4 and the Parkway 36-7, probably should not be included as B Sand producers. This is due to the lack of increased production after their recompletions. These two wells were included because Platt, Sparks had attributed some B Sand production to them. For these reserves to receive credit, they were put in the B Sand. The cums are nominal and no remaining reserves were included for either well because they are sub-economic. The wells included in the B Sand are:

	<u>Recoverable Oil Reserves</u>	<u>Analysis Method</u>
Osage 5	54,551 Bbls	Decline Curve
Renegade 3	63,501 Bbls	Decline Curve
Renegade 1	10,012 Bbls	Decline Curve
Flathead 1	7,884 Bbls	Decline Curve

Osage 4	1,626 Bbls	Decline Curve
Parkway 36-7	<u>364 Bbls</u>	Decline Curve
Total	137,938 Bbls	

C SAND -- The Platt, Sparks study on the C Sand includes 22 wells. Reservoir and waterflood simulations were run assuming that all wells were producing from the C Sand only. The results of these simulations were then applied to the A and B Sands to come up with the parameters mentioned above. The reservoir simulation consisted of log analysis, production history, and transient well tests. The wells and their recoverable oil reserves are as follows:

	<u>Recoverable Oil Reserves</u>	<u>Recoverable Gas Reserves</u>
Apache 1	197,394 Bbls	716,212 MCF
Apache 2	137,998 Bbls	475,416 MCF
Apache A-1	124,000 Bbls	592,185 MCF
Apache A-2	258,486 Bbls	780,015 MCF
Apache A-3	190,241 Bbls	604,181 MCF
Apache A-4	74,046 Bbls	229,858 MCF
Longknife 1	71,663 Bbls	362,842 MCF
Parkway 36-1	41,000 Bbls	608,814 MCF
Parkway 36-2	93,817 Bbls	399,136 MCF
Parkway 36-3	75,444 Bbls	688,790 MCF
Parkway 36-4	30,862 Bbls	371,402 MCF
Parkway 36-6	31,088 Bbls	153,334 MCF
Parkway 36-7	17,116 Bbls	160,285 MCF
Flathead 1	69,000 Bbls	646,000 MCF
Osage 1	312,422 Bbls	896,472 MCF

Osage 2	239,754 Bbls	530,113 MCF
Osage 3	230,740 Bbls	929,736 MCF
Osage 4	224,582 Bbls	871,298 MCF
Renegade 1	206,944 Bbls	761,186 MCF
Renegade 2	257,900 Bbls	907,643 MCF
Renegade 3	13,000 Bbls	74,180 MCF
Halcon 2	<u>11,162 Bbls</u>	<u>9,025 MCF</u>
Total	2,908,659 Bbls	11,768,123 MCF

RECOVERABLE/REMAINING GAS & USABLE WELLBORES -- The recoverable gas for the C Sand from the Platt, Sparks report was 4 MCF/BBL. The same ratio was applied to the A and B Sands. The recoverable oil was multiplied by four to get the recoverable gas. The remaining gas was calculated by subtracting the cumulative gas from the recoverable gas. The only exception to this is the Parkway 36-2 in the A Sand. It has produced 1,116 Bbl and 1,902 MCF. It has no remaining reserves and, therefore, has a cumulative GOR less than four. The usable wellbores are those that pass through each of the three sands. All wells penetrated these sands with the exception of the Parkway 36-1.

A summary of the values of each parameter on a tract-by-tract basis for each sand appears in Figure 21. Figure 22 gives working interest participations for each operator in the field based on the parameter values in Figure 21. Figure 23 gives the royalty interest participations for each royalty interest owner in the field based on parameter values in Figure 21.

TRACT NO. & TRACT NAME	DESCRIPTION OF LAND	ACRES	SERIAL NO. & EFFECTIVE DATE	BASIC ROYALTY OWNER AND PERCENTAGE	EXHIBIT "B"		OVERRIDING ROYALTY OWNER AND PERCENTAGE	WORKING INTEREST OWNER AND PERCENTAGE	PARTICIPATION OF TRACT IN UNIT
					LESSEE OF RECORD				
5 TRACT 5	T19S - R29E, N.M.P.M. Sec. 35: N½SW¼, SE½SW¼, W½SE¼, Osage Federal #1, #2, #3 Osage Federal #4, #5	200.00	NM - 24160 2 - 1 - 75 HBP	United States of America 12.5%	Conoco, Inc.	Mobil Producing & Exploration 5% P/P Mary Ard .1458% Francis Bowden .21875% Coronet Trading 1% Alan Hannifin .2% Roderick Davis .2% Edward Hudson, Jr. .2709% Josephine Hudson .1458% Alan Jochimsen 2% Delmar Lewis .21875% Kathleen Bullard .2% William Eiland .4% Siete Oil and Gas Corporation 2.5%	Conoco, Inc. 20% Santa Fe Energy Resources 16.67% Hanson Operating Company 10% Siete Oil and Gas Corporation, etal 53.33%	0.285527	
2 TRACT 2	T19S - R29E, N.M.P.M. Sec. 35: N½N½ Apache Federal #1 - A, #2 - A Apache Federal #3 - A, #4 - A	160.00	NM - 61582 5/1/85 HBP	United States of America 12.5%	Southland Royalty	None	Southland Royalty 100%	0.254424	
3 TRACT 3	T19S - R29E, N.M.P.M. Sec. 35: SW¼NW¼, SW¼NE¼, Renegade Federal #2, #3	80.00	NM - 67102 11 - 1 - 86 HBP	United States of America Sliding Scale	Santa Fe Energy Resources	Santa Fe Energy Resources 7.291665% Siete Oil and Gas Corporation 1.041665%	Santa Fe Energy Resources 25% Hanson Operating Company 11.25% Siete Oil and Gas Corporation, etal 63.75%	0.124661	
4 TRACT 4	T19S - R29E, N.M.P.M. Sec. 35: SE½NW¼ Renegade Federal #1	40.00	NM - 67102 11 - 1 - 86 HBP	United States of America Sliding Scale	Santa Fe Energy Resources	Santa Fe Energy Resources 8.75% Siete Oil and Gas Corporation 2.5%	Santa Fe Energy Resources 29.1675% Hanson Operating Company 9.375% Siete Oil and Gas Corporation, etal 61.4575%	0.058770	
7 TRACT 7	T19S - R29E, N.M.P.M. Sec. 35: SE¼NE¼, NE¼SE¼ Apache Federal #1, #2	80.00	NM - 54865 7/1/83 HBP	United States of America 12.5%	Southland Royalty	Syncline Partnership 5%	Southland Royalty 100%	0.119002	

TRACT NO. & TRACT NAME	DESCRIPTION OF LAND	ACRES	SERIAL NO. & EFFECTIVE DATE	EXHIBIT "B"		OVERRIDING ROYALTY OWNER AND PERCENTAGE	WORKING INTEREST OWNER AND PERCENTAGE	PARTICIPATION OF TRACT IN UNIT
				BASIC ROYALTY OWNER AND PERCENTAGE	LESSEE OF RECORD			
8 TRACT 8	T19S-R29E, N.M.P.M. Sec. 35: SE 1/4 SE 1/4 Longknife Federal # 1	40.00	NM-67102 11-1-86 HBP	United States of America Sliding Scale	Santa Fe Energy Resources	Santa Fe Energy Resources 3.125% Siele Oil and Gas Corporation 3.125%	Santa Fe Energy Resources 100%	0.019633
1 TRACT 1	T19S-R29E, N.M.P.M. Sec. 26: SW 1/4 SE 1/4 Halcon State # 2	40.00	K-4169 6-16-64 HBP	State of New Mexico 12.5%	Strata Production Company	Hanagan Petroleum Corporation .094328% Randolph M. Richardson .515093% McKay Oil Corporation .301851% Marvin Gross .075463% S. H. Gavin .052069% Harry D Blake, Jr. .015093% Damon Richards .015092% Warren Scott .015093% Frank & Robin Morgan .030185% Ronadero Company, Inc. .039618% Pete & Gale Balog .030185% Jack & Edna Mae Walker .030185% Stephen T. Mitchell .5% Robert Eaton .015093% Red Oak Cattle Company .022639% Permian Basin Investment Corporation .5% Warren Inc. .075463% Monarch Oil & Gas Inc. .015093% Land West .045278% Winn Investments Inc .030185% Strata Production Company .030185% Stan Stocker .015092% Duane Brown .015093% Don Gavlick .007546% James & Pam Schultz .015093% Bruce Pierce .030185%	McKay Oil Corporation 16.654577% UMC Petroleum Corporation 16.727113% Strata Production Company, etal 66.61831%	0.003475

EXHIBIT "B"

TRACT NO. & TRACT NAME	DESCRIPTION OF LAND	ACRES	SERIAL NO. & EFFECTIVE DATE	BASIC ROYALTY OWNER AND PERCENTAGE	LESSEE OF RECORD	OVERRIDING ROYALTY OWNER AND PERCENTAGE	WORKING INTEREST OWNER AND PERCENTAGE	PARTICIPATION OF TRACT IN UNIT
1 TRACT 1 (Cont')	T19S-R29E, N.M.P.M. Sec. 26; SW 1/4 SE 1/4 Halcon State #2	40.00	K-4169 6-16-64 HBP	State of New Mexico 12.5%	Sratta Production Company	Andrew Dana .015092% Permian Hunter Corporation .196203% Lori Lynn Scott .015092% Sealy Cavin, Jr. .073576% Scott Exploration .102629% Radmacher Family Trust .015093% Mildred Ruth Fergeson .015093% Polo Oil & Gas Company .045278%		
6 TRACT 6	T20S-R29E, N.M.P.M. Sec. 2; Lot 2 Flathead State #1	40.77	LG-4525 9-1-77 HBP	State of New Mexico 12.5%	Cal-Mon Oil Company	Cal-Mon Oil Company 3.161133% A. T. Carlton 3.140693% Robert L. Monagan .187635% Garon Cagle .039063% Tom C. Wany .039063% Dorothy D. Dunlap .039062% Forrest Dunlap, III .039062% J. H. Herd .313854% Marshall & Winston, Inc. .418473% Estoril Producing Corporation .392318% John H. Hendrix .392318% Patrick W. Arthur Production Company .104608% Hill Revocable Trusts .122055% Dorothy Jean Keenom, Trustee of the Nancy Jones Trust .043591% Dorothy Jean Keenom, Trustee of the Thomas Hill Puff Jones Trust .043591% Joe S. Hill .104608% Horseshoe Oil and Gas .052304% Nautilus Exploration, Inc. .052304%	Santa Fe Energy Resources 11.669% BPO* Southland Royalty 25% BPO* Siete Oil and Gas Corporation, et al 63.331% BPO* *The interest of Southland, Santa Fe, and Siete, et al may be reduced at payout subject to certain ORRI holders option to convert their retained ORRI to a 1/3 WI, proportionately reduced, at payout, as per F/O Agreement dated May 1, 1990.	0.029115

EXHIBIT "B"

TRACT NO. & TRACT NAME	DESCRIPTION OF LAND	ACRES	SERIAL NO. & EFFECTIVE DATE	BASIC ROYALTY OWNER AND PERCENTAGE	LESSEE OF RECORD	OVERRIDING ROYALTY OWNER AND PERCENTAGE	WORKING INTEREST OWNER AND PERCENTAGE	PARTICIPATION OF TRACT IN UNIT
6 TRACT 6 (Cont)	T20S-R29E, N.M.P.M. Sec. 2; Lot 2 Flathead State # 1	40.77	LG-4525 9-1-77 HBP	State of New Mexico 12.5%	Cal-Mon Oil Company	Geraldine L. Zoller .209247% Jack Markham .104639% J. M. Welborn .052304% Anna Mae Welborn Trust .052304% Ernest Angelo, Jr. .156927% Russell J. Ramstand, Sr. .006725% J. Barnes Ramstand .048423% C. R. Burch .014796% R. J. Ramstand, Jr. .014796% J. Clem Barnes Estate .048423% V. Elaine Murphy .014796% Christine Malbams .014796% Steve C. Barnes .014796% Sleepy Wynn .006725% Shirley Ann Wynn .048423% C. F. Wynn .014796% Elizabeth Ann Ramstand .014946% Julie Ellen Barnes .014946% Adrienne Wynn 1985 Trust .014946%	Santa Fe Energy Resources 100% BPO 91.67% APO Siete Oil and Gas Corporation 8.33% APO	0.027093
9 TRACT 9	T19S-R29E, N.M.P.M. Sec. 36; W $\frac{1}{2}$ NW $\frac{1}{4}$ Parkway State 36 # 6, # 7	80.00	V-1576 9-1-85 HBP	State of New Mexico 16.66667%	Santa Fe Energy Resources 50% Siete Oil and Gas Corporation 50%	Santa Fe Energy Resources 2.0833% Siete Oil and Gas Corporation 2.0833%	Santa Fe Energy Resources 100% BPO 93.75% APO Siete Oil and Gas Corporation 6.25% APO	0.061301
10 TRACT 10	T19S-R29E, N.M.P.M. Sec. 36; W $\frac{1}{2}$ SW $\frac{1}{4}$, NE $\frac{1}{2}$ SW $\frac{1}{4}$ Parkway State 36 # 2, # 3, # 4	120.00	V-1576 9-1-85 HBP	State of New Mexico 16.66667%	Santa Fe Energy Resources 50% Siete Oil and Gas Corporation 50%	Santa Fe Energy Resources 2.0833% Siete Oil and Gas Corporation 2.0833%	Santa Fe Energy Resources 100% BPO 93.75% APO Siete Oil and Gas Corporation 6.25% APO	0.061301

TRACT NO. & TRACT NAME	DESCRIPTION OF LAND	ACRES	SERIAL NO. & EFFECTIVE DATE	BASIC ROYALTY OWNER AND PERCENTAGE	EXHIBIT "B" LESSEE OF RECORD	OVERRIDING ROYALTY OWNER AND PERCENTAGE	WORKING INTEREST OWNER AND PERCENTAGE	PARTICIPATION OF TRACT IN UNIT
11 TRACT 11	T19S-R29E, N.M.P.M. Sec. 36; SE 1/4 NW 1/4 Parkway State 36 #1	40.00	V-1576 9-1-85 HBP	State of New Mexico 16.66667%	Santa Fe Energy Resources 50% Siete Oil and Gas Corporation 50%	None	Santa Fe Energy Resources 75% Siete Oil and Gas Corporation 25%	0.016979

SUMMARY

ACRES	PERCENTAGE
Federal Lands	65.16%
State Lands	34.84%
	<u>100.00%</u>

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☒ no
- II. Operator: Siete Oil & Gas Corporation
Address: P.O. BOX 2523
Contact party: Robert Lee Phone: 505-622-2202
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Robert Lee Title: Production Manager

Signature: Robert Lee Date: _____

- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

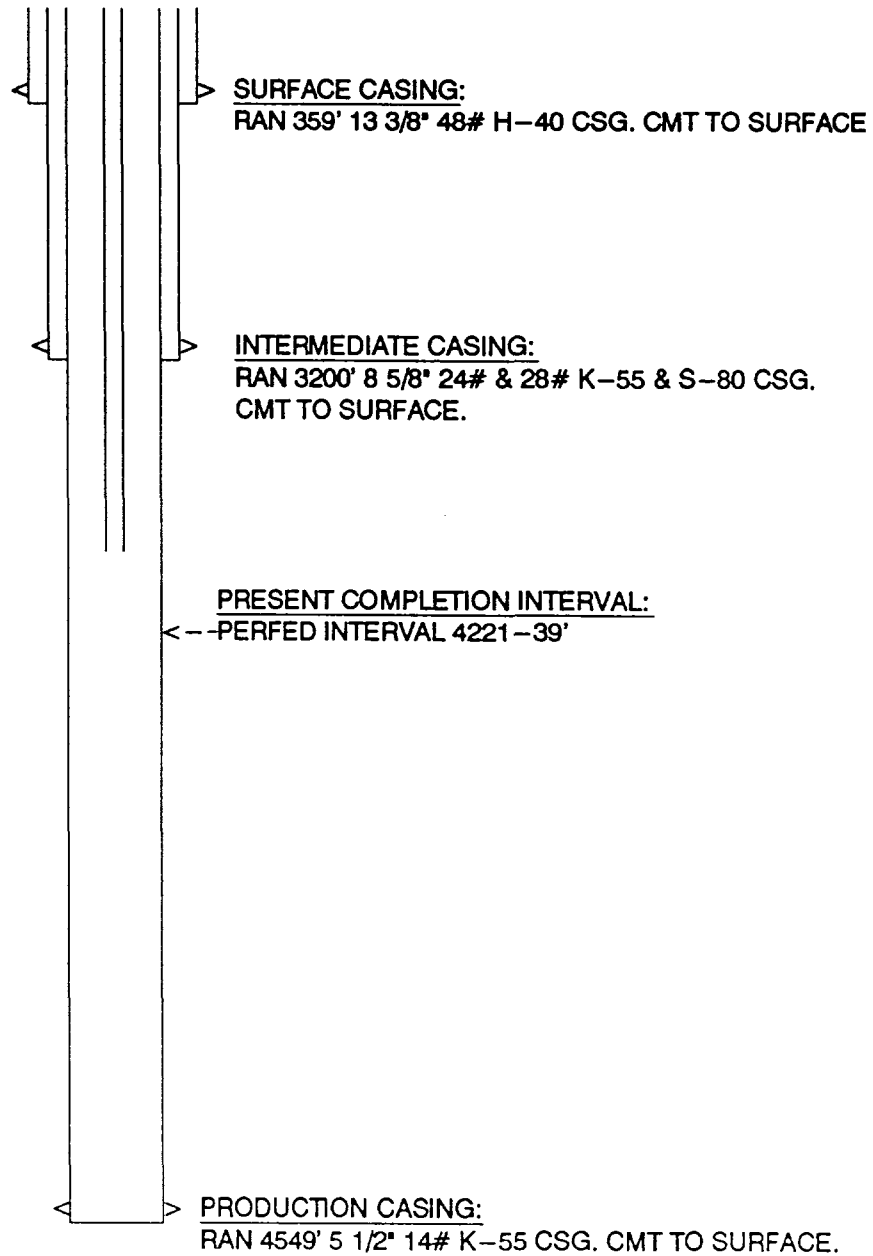
NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

SIETE OIL & GAS CORPORATION

WELL: APACHE A-3 CURRENT
FIELD: PARKWAY DELAWARE
INTERVAL: DELAWARE
Comp: 4/21/89
IP: 216 BOPD, 126 MCFGPD, 65 BWPD
SPUDDED: 3/22/89

LOCATION:
890 FNL & 990 FEL
SEC 35 T19S R29E
EDDY COUNTY, NM

API #: 30-15-26079



DRAWN BY: BJG
DATE: MARCH 23, 1992

TD: 4550'
PBSD: 4501'

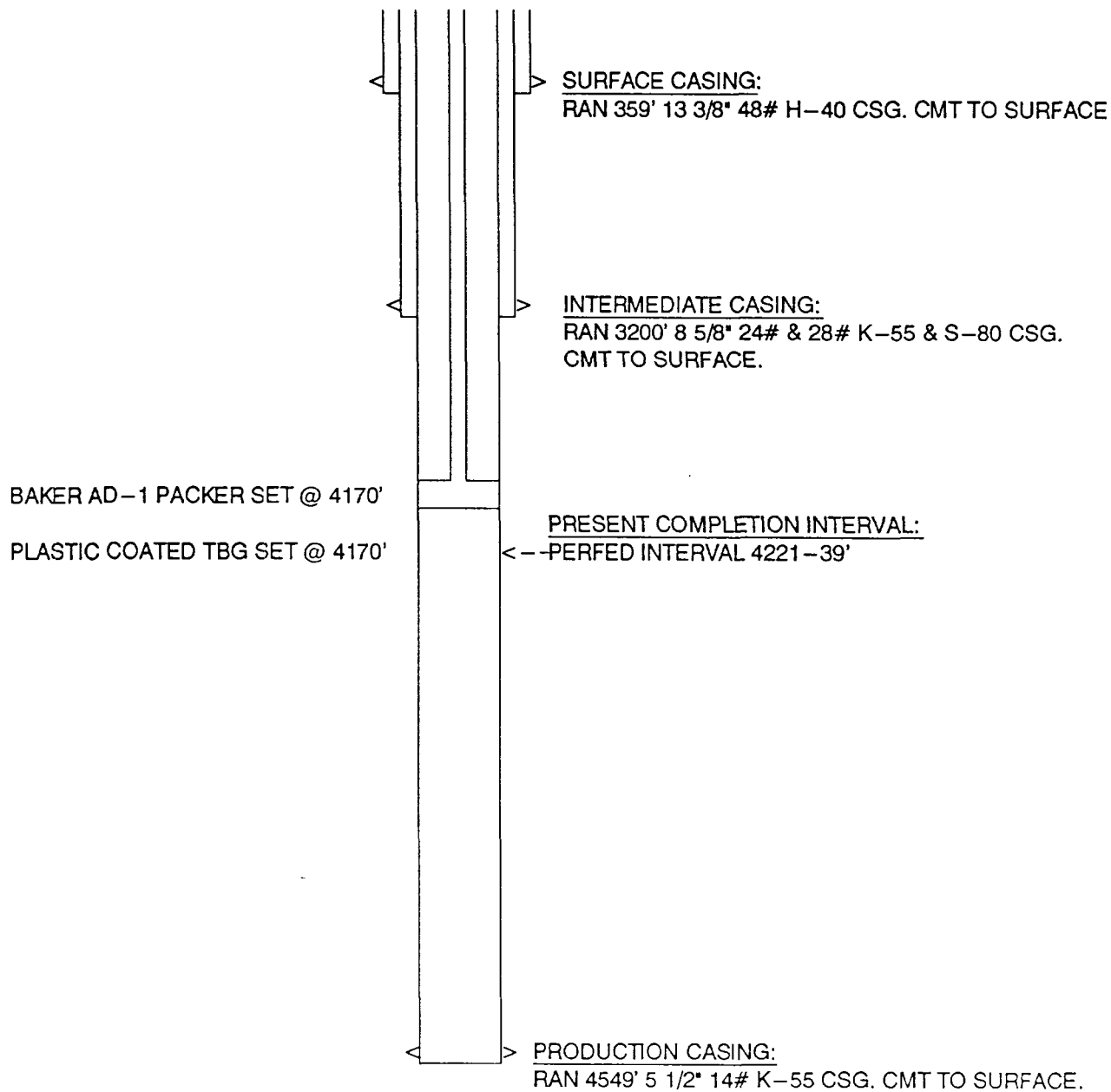
SIETE OIL & GAS CORPORATION

WELL: APACHE A-3
FIELD: PARKWAY DELAWARE
INTERVAL: DELAWARE
Comp: 4/21/89
IP: 216 BOPD, 126 MCFGPD, 65 BWPD
SPUDDED: 3/22/89

PROPOSED

LOCATION:
890 FNL & 990 FEL
SEC 35 T19S R29E
EDDY COUNTY, NM

API #: 30-15-26079



DRAWN BY: BJG
DATE: MAY 19, 1992

TD: 4550'
PBD: 4501'

PARKWAY WATERFLOOD UNIT

APACHE A-3 - CONVERT TO INJECTION

NMOCD Form C-108 Section III

III. Data on injection well(s)

A. Injection well information (see attached schematic)

Tabular data

1. Lease: Apache A
Well No: #3
Location: 890' FNL & 990' FEL, Sec 35 T19S R29E, Eddy County, NM
2. Casing: 13 3/8" intermediate @ 359', circ cement to surface.
8-5/8" intermediate @ 3200', circ cement to surface.
5-1/2" production @ 4550', circ cmt to surface.
3. Injection tubing: + or - 130 jts 2-3/8", 4.7 lb/ft, J-55 internally plastic coated tubing.
4. Packer: Baker Model AD-1 injection packer set @ 4170'.

B. Other well information

1. Injection formation: Delaware
Field: Parkway
2. Existing perforations 4221-39'.
3. This well was originally drilled as an oil producer.
4. There are no other zones completed in this wellbore.
5. Within the area of this project the Yates formation is marginally productive at a depth of 1440'.

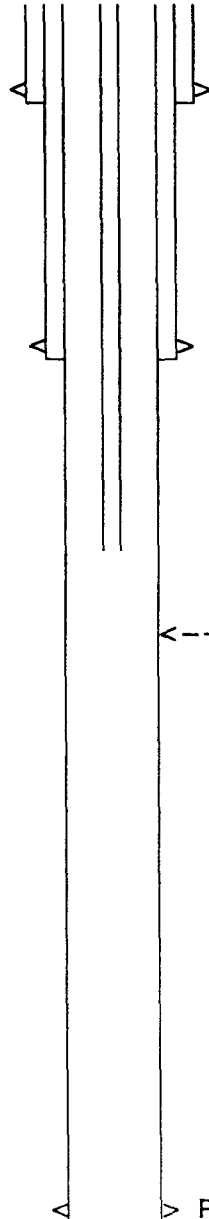
SIETE OIL & GAS CORPORATION

WELL: APACHE A-4 CURRENT
FIELD: PARKWAY DELAWARE
INTERVAL: DELAWARE
Comp: 8/16/89
IP: 93 BOPD, 175 MCFGPD, 420 BWPD
SPUDDED: 7/13/89

LOCATION:
990' FNL & 940' FEL *FWL*
SEC 35 T19S R29E
EDDY COUNTY, NM

API #: 30-15-26143

ELEVATION: 3310' GR
ZERO: 15' AGL



SURFACE CASING:

RAN 353' 13 3/8" 48# K-55 CSG. CMT TO SURFACE

INTERMEDIATE CASING:

RAN 3200' 8 5/8" 24# K-55 & 28# S-80 CSG.
CMT TO SURFACE.

PRESENT COMPLETION INTERVAL:

<--PERFED INTERVAL 4210-46' & 4295'-4461'

PRODUCTION CASING:

RAN 4550' 5 1/2" 15.5# K-55 CSG. TOC @ 1956'

DRAWN BY: BJB
DATE: MARCH 23, 1992

TD: 4550'
PBTD: 4500'

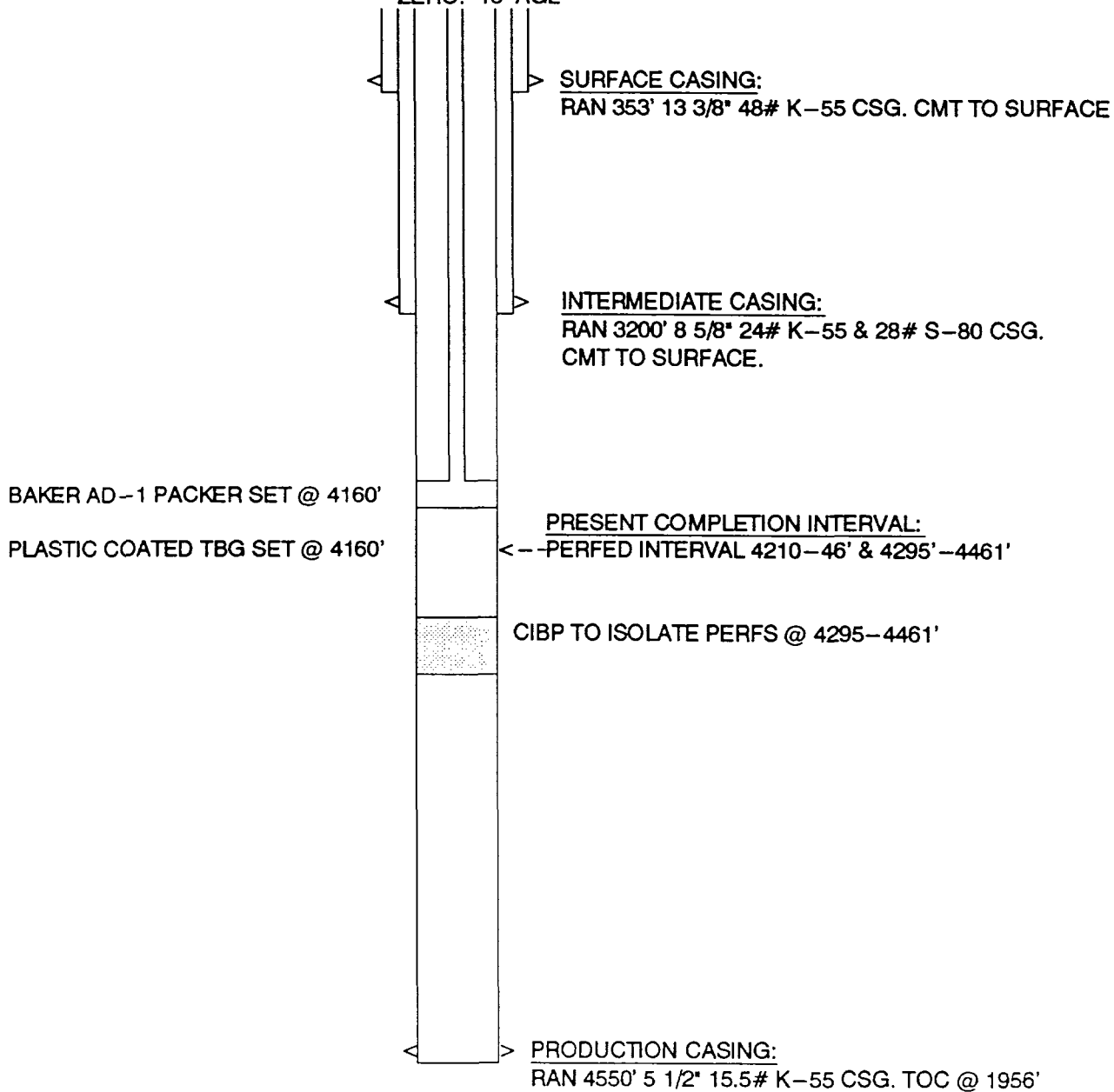
SIETE OIL & GAS CORPORATION

WELL: APACHE A-4
FIELD: PARKWAY DELAWARE
INTERVAL: DELAWARE
Comp: 8/16/89
IP: 93 BOPD, 175 MCFGPD, 420 BWPD
SPUDDED: 7/13/89

PROPOSED

LOCATION:
990' FNL & 940' FEL
SEC 35 T19S R29E
EDDY COUNTY, NM
API #: 30-15-26143

ELEVATION: 3310' GR
ZERO: 15' AGL



DRAWN BY: BJG
DATE: NOV 2, 1992

TD: 4550'
PBTD: 4500'

PARKWAY WATERFLOOD UNIT

APACHE A-4 - CONVERT TO INJECTION

NMOCD Form C-108 Section III

III. Data on injection well(s)

A. Injection well information (see attached schematic)

Tabular data

1. Lease: Apache A
Well No: #4
Location: 990' FNL & 940' FEL, Sec 35 T19S R29E, Eddy County, NM
2. Casing: 13 3/8" intermediate @ 353', circ cement to surface.
8-5/8" intermediate @ 3200', circ cement to surface.
5-1/2" production @ 4550', TOC @ 1956' based on CBL.
3. Injection tubing: + or - 130 jts 2-3/8", 4.7 lb/ft, J-55 internally plastic coated tubing.
4. Packer: Baker Model AD-1 injection packer set @ 4160'.

B. Other well information

1. Injection formation: Delaware
Field: Parkway
2. Existing perforations 4210-46'.
3. This well was originally drilled as an oil producer.
4. The original completion at 4295-4461' will be isolated w/CIBP.
5. Within the area of this project the Yates formation is marginally productive at a depth of 1440'.

SIETE OIL & GAS CORPORATION

WELL: OSAGE FEDERAL #5
FIELD: PARKWAY DELAWARE
INTERVAL: DELAWARE
Comp: 1/16/89
IP: 62 BOPD, 89 MCFGPD, 83 BWPD
Spudded: 17 1/2" HOLE ON 11/30/88

CURRENT

LOCATION:
1980' FSL & 760' FWL
SEC 35 T19S R29E
EDDY COUNTY, NM

API #: 30-15-26029

ELEVATION: 3319' GR

ZERO: 8' AGL

EQUIPMENT IN HOLE

SURFACE CASING:

RAN 5 JTS (186') 20" 94# K-55 CSG, SET @ 172'.
CMT W/200 SXS. HEIL W/4% CACL.
RAN 9 JTS (382') 13 3/8" 54.5# K-55 CSG, SET @
364'. CMT W/100 SXS 35/65 POZA W/6% D-20
3% S-1 25# D-29, TAIL-IN W/200 SXS HEIL W/3%
S-1, 25# D-29, DID NOT CIRC. 1" CMT TO SURF.

INTERMEDIATE CASING:

RAN 75 JTS (3204') 8 5/8" 24# J-55 CSG, SET @
3200'. CMT W/100 SXS 35/65 POZA + ADDITIVES,
500 SXS 35/65 POZ + ADDITIVES, TAIL-IN W/200
SXS HEIL + ADDITIVES, 1" CMT TO SURFACE.

PRESENT COMPLETION INTERVAL:

<-- PERFED INTERVAL 4135-4150' (11 SHOTS)
SPOT 1 BBL ACID OVER PERFS, SET PKR @ 4061'
ACIDIZE W/2000 GAL 15% HCL + 22 BALLSEALERS,
BROKE @ 2300, AIR-3 BPM, AIP-1540, BALLED
OUT @ 3420'. FPIP-1460, ISIP-950, 10 MIN-940.
FRACED W/15000GAL 30# CROSSLINK, 2000# 100
MESH, 19,440# 20/40, 8400# 12/20, AIR-4 BPM,
MAX-1868, FPIP-1415, ISIP-1030, @ 5 MIN-984
@ 10 MIN-975, @ 15 MIN-966.

SN @ 4093'

PRODUCTION CASING:

RAN 21 JTS (5008') 5 1/2" 15.5# J-55 CSG
SET @ 5000', CMT W/450 SXS. TAIL-IN STANDARD +
ADDITIVES. TOC @ 2540'

DRAWN BY: BJG
DATE: SEPT. 2, 1992

TD: 5000'
PBTD: 4958'

SIETE OIL & GAS CORPORATION

WELL: OSAGE FEDERAL #5 PROPOSED
FIELD: PARKWAY DELAWARE
INTERVAL: DELAWARE
Comp: 1/16/89
IP: 62 BOPD, 89 MCFGPD, 83 BWPD
Spudded: 17 1/2" HOLE ON 11/30/88

LOCATION:
1980' FSL & 760' FWL
SEC 35 T19S R29E
EDDY COUNTY, NM
API #: 30-15-26029

ELEVATION: 3319' GR

ZERO: 8' AGL

SURFACE CASING:

RAN 5 JTS (186') 20" 94# K-55 CSG, SET @ 172'.
CMT W/200 SXS. HEIL W/4% CACL.

RAN 9 JTS (382') 13 3/8" 54.5# K-55 CSG, SET @
364'. CMT W/100 SXS 35/65 POZA W/6% D-20
3% S-1 25# D-29, TAIL-IN W/200 SXS HEIL W/3%
S-1, 25# D-29, DID NOT CIRC. 1" CMT TO SURF.

INTERMEDIATE CASING:

RAN 75 JTS (3204') 8 5/8" 24# J-55 CSG, SET @
3200'. CMT W/100 SXS 35/65 POZA + ADDITIVES,
500 SXS 35/65 POZ + ADDITIVES, TAIL-IN W/200
SXS HEIL + ADDITIVES, 1" CMT TO SURFACE.

PRESENT COMPLETION INTERVAL:

<-- PERFED INTERVAL 4135-4150'. SQUEEZE W/CMT

BAKER AD-1 PACKER @ 4170'-->
PLASTIC COATED TBG SET @ 4170'

PROPOSED COMPLETION INTERVAL

<-- PERF 4220-4300', FRAC W/40000 GAL 30# X-LINK
AND 115,000# SAND.

PRODUCTION CASING:

RAN 21 JTS (5008') 5 1/2" 15.5# J-55 CSG
SET @ 5000', CMT W/450 SXS. TAIL-IN STANDARD +
ADDITIVES. TOC @ 2540'

DRAWN BY: BJG
DATE: MARCH 6, 1992

TD: 5000'
PBSD: 4958'

PARKWAY WATERFLOOD UNIT

OSAGE #5 - CONVERT TO INJECTION

NMOCD Form C-108 Section III

III. Data on injection well(s)

A. Injection well information (see attached schematic)

Tabular data

1. Lease: Osage
Well No: #5
Location: 1980' FSL & 760' FWL, Sec 35 T19S R29E, Eddy County, NM
2. Casing: 20" surface @ 172', circ cement to surface.
13-3/8" intermediate @ 382', circ cement to surface.
8-5/8" intermediate @ 3204', circ cement to surface
5-1/2" production @ 5008', TOC @ 2540' based on CBL.
3. Injection tubing: + or - 130 jts 2-3/8", 4.7 lb/ft, J-55 internally plastic coated tubing.
4. Packer: Baker Model AD-1 injection packer set @ 4170'.

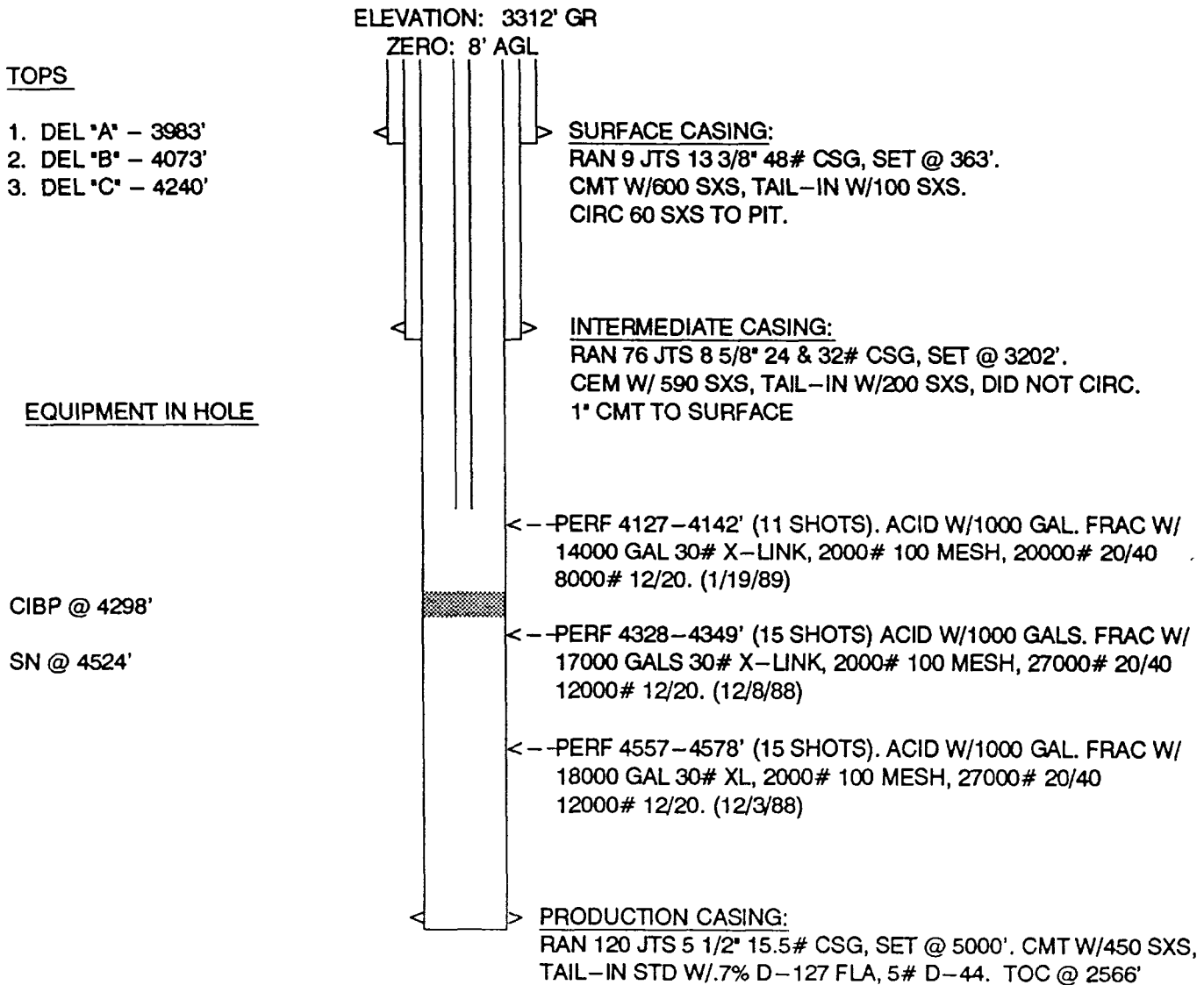
B. Other well information

1. Injection formation: Delaware
Field: Parkway
2. Perforated interval will be between 4220 and 4300'.
3. This well was originally drilled as an oil producer.
4. The original completion at 4135-4150' will be squeezed with at least 100 sacks of cement.
5. Within the area of this project the Yates formation is marginally productive at a depth of 1440'.

SIETE OIL & GAS CORPORATION

WELL: RENEGADE FEDERAL #3 CURRENT
FIELD: PARKWAY DELAWARE
INTERVAL: DELAWARE
Comp: 1/27/89
IP: 50 BOPD, 62 MCFGPD, 80 BWPD (GOR 1240) GRAVITY 39.6
Spudded: 17 1/2" HOLE ON 11/15/88

LOCATION:
2230' FNL & 760' FWL
SEC 35 T19S R29E
EDDY COUNTY, NM
API #: 30-015-26006



DRAWN BY: BJG
DATE: SEPT. 2, 1992

TD: 5000'
PBSD: 4298'

SIETE OIL & GAS CORPORATION

WELL: RENEGADE FEDERAL #3 (PROPOSED)

FIELD: PARKWAY DELAWARE

INTERVAL: DELAWARE

Comp: 1/27/89

IP: 50 BOPD, 62 MCFGPD, 80 BWPD (GOR 1240) GRAVITY 39.6

Spudded: 17 1/2" HOLE ON 11/15/88

LOCATION:

2230' FNL & 760' FWL

SEC 35 T19S R29E

EDDY COUNTY, NM

API #: 30-015-26006

ELEVATION: 3312' GR

ZERO: 8' AGL

SURFACE CASING:

RAN 9 JTS 13 3/8" 48# CSG, SET @ 363'.

CMT W/400 SXS, TAIL-IN W/100 SXS.

CIRC 60 SXS TO PIT.

INTERMEDIATE CASING:

RAN 76 JTS 8 5/8" 24 & 32# CSG, SET @ 3202'.

CEM W/ 190 SXS, TAIL-IN W/200 SXS, DID NOT CIRC.

1" CMT TO SURFACE

PRESENT COMPLETION INTERVAL:

DELAWARE

<-- PERF 4127-4142' SQUEEZE WITH CEMENT

BAKER AD-1 PACKER @ 4190'-->

PLASTIC LINED TBG SET @ 4190'

PROPOSED COMPLETION INTERVAL

<-- PERF 4240-4310' FRAC W/40,000 GAL 30# XL
115000# 20/40.

CIBP @ 4298'

CIBP

<-- PERF 4328-4249'

<-- PERF 4557-4578'

PRODUCTION CASING:

RAN 120 JTS 5 1/2" 15.5# CSG, SET @ 5000'. CMT W/450 SXS,

TAIL-IN STD W/.7% D-127 FLA, 5# D-44. TOC @ 2566'

DRAWN BY: BJG

DATE: AUGUST 2, 1991

TD: 5000'

PBTD:4298'

PARKWAY WATERFLOOD UNIT

RENEGADE #3 - CONVERT TO INJECTION

NMOCD Form C-108 Section III

III. Data on injection well(s)

A. Injection well information (see attached schematic)

Tabular data

1. Lease: Renegade
Well No: #3
Location: 2230' FNL & 760' FWL, Sec 35 T19S R29E, Eddy County, NM
2. Casing: 13 3/8" surface @ 363', circ cement to surface.
8-5/8" intermediate @ 3202', cement to surface
5-1/2" production @ 5000', TOC @ 2566' based on CBL.
3. Injection tubing: + or - 131 jts 2-3/8", 4.7 lb/ft, J-55 internally plastic coated tubing.
4. Packer: Baker Model AD-1 injection packer set @ 4190'.

B. Other well information

1. Injection formation: Delaware
Field: Parkway
2. Perforated interval will be between 4240 and 4310'.
3. This well was originally drilled as an oil producer.
4. The original completion at 4127-4142' will be cement squeezed with at least 100 sacks of cement.
5. Within the area of this project the Yates formation is marginally productive at a depth of 1440'.

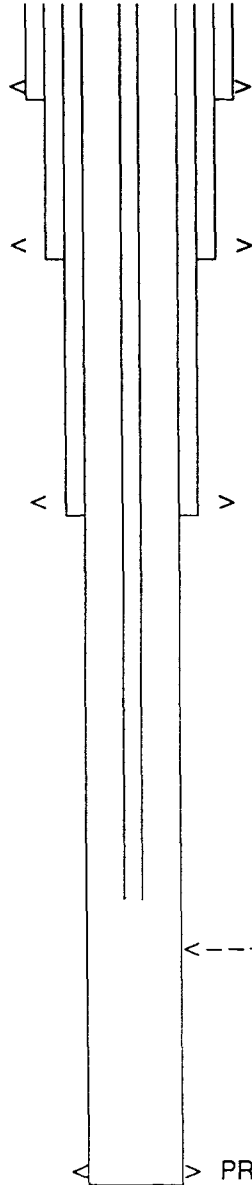
SIETE OIL & GAS CORPORATION

WELL: FLATHEAD STATE #1 (CURRENT)
FIELD: PARKWAY
INTERVAL: DELAWARE
Comp: 8/23/90
IP- 52 BOPD, 128 BWPD, 50 MCFGPD (EST)
API#: 30-015-26433

LOCATION:
330' FNL & 1650' FEL
SEC 2 T20S R29E
Eddy County, N.M.

Spudded 26" HOLE ON 7/26/90

ELEVATION: 3320' GR
ZERO:



SURFACE CASING - ran 10 JTS 20#, SET @ 340'
CEM W/ 320 SXS, TAIL-IN W/250 SXS. DID NOT CIRC.
1 INCHED TO 72', CEM W/ 90 SXS, CIRC 9 SXS TO PIT
(7/27/90)

INTERMEDIATE CASING - RAN 29 JTS 13 3/8" 54.5#, SET
@ 1250'. CEM W/680 SXS, TAIL-IN W/250 SXS, CIRC 10
SXS TO PIT (7/30/90)

INTERMEDIATE CASING - RAN 72 JTS 8 5/8" 24#,
SET @ 3000'. CEM W/250 SXS + 820 SXS, TAIL-IN W/240
SXS, CIRC 150 SXS TO PIT. (8/03/90)

PRESENT COMPLETION INTERVAL

Delaware

< --- 1st set of perfs 4118-4146' (14 HOLES). ACID W/1000 GAL.
FRAC W/17000 GAL 30# KL, 2000# 100 MESH, 23300#
20/40, 8300# 12/20 (8/21/90)

PRODUCTION CASING - 105 JTS 5 1/2" 15.5#, SET @ 4500'
CEM W/ 450 SXS, TAIL-IN W/150 SXS. (TOC @ 155')

EQUIPMENT IN HOLE

DRAWN BY: BJB
DATE: JUNE 17, 1991

TD: 4500'
PBSD: 4455'

SIETE OIL & GAS CORPORATION

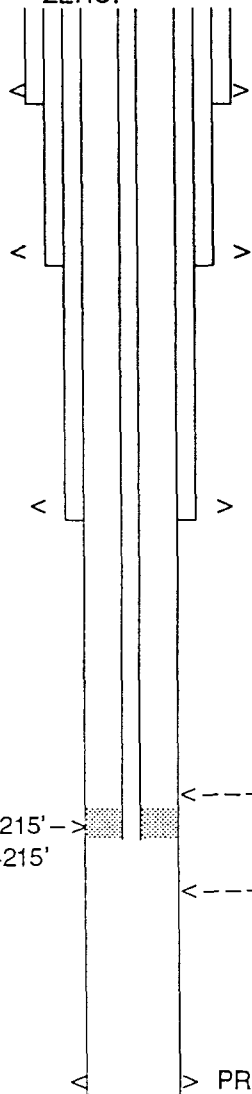
WELL: FLATHEAD STATE #1 (PROPOSED)
FIELD: PARKWAY
INTERVAL: DELAWARE
Comp: 8/23/90
IP- 52 BOPD, 128 BWPD, 50 MCFGPD (EST)
API#: 30-015-26433

LOCATION:
330' FNL & 1650' FEL
SEC 2 T20S R29E
Eddy County, N.M.

Spudded 26" HOLE ON 7/26/90

ELEVATION: 3320' GR

ZERO:



SURFACE CASING - ran 10 JTS 20#, SET @ 340'
CEM W/ 320 SXS, TAIL-IN W/250 SXS. DID NOT CIRC.
1 INCHED TO 72', CEM W/ 90 SXS, CIRC 9 SXS TO PIT
(7/27/90)

INTERMEDIATE CASING - RAN 29 JTS 13 3/8" 54.5#, SET
@ 1250'. CEM W/680 SXS, TAIL-IN W/250 SXS, CIRC 10
SXS TO PIT (7/30/90)

INTERMEDIATE CASING - RAN 72 JTS 8 5/8" 24#,
SET @ 3000'. CEM W/250 SXS + 820 SXS, TAIL-IN W/240
SXS, CIRC 150 SXS TO PIT. (8/03/90)

PRESENT COMPLETION INTERVAL

Delaware

<---PERFS 4118-4146' SQUEEZE W/CEMENT.

PROPOSED COMPLETION INTERVAL

<---PERF 4266-4350. FRAC W/40000 GAL 30# X-LINK AND
115,000# SAND.

PRODUCTION CASING - 105 JTS 5 1/2" 15.5#, SET @ 4500'
CEM W/ 450 SXS, TAIL-IN W/150 SXS. (TOC @ 155')

EQUIPMENT IN HOLE

BAKER AD-1 PACKER SET @ 4215'->
PLASTIC COATED TBG SET @ 4215'

DRAWN BY: BJB
DATE: JUNE 17, 1991

TD: 4500'
PSTD: 4455'

PARKWAY WATERFLOOD UNIT

FLATHEAD STATE #1 - CONVERT TO INJECTION

NMOCD Form C-108 Section III

III. Data on injection well(s)

A. Injection well information (see attached schematic)

Tabular data

1. Lease: Flathead
Well No: #1
Location: 330' FNL & 1650' FEL, Sec 2 T20S R29E, Eddy
County, NM
2. Casing: 20" surface @ 340', circ cement to surface.
13-3/8" intermediate @ 1250', circ cement to
surface
5-1/2" production @ 4500', TOC @ 155' based on
CBL.
3. Injection tubing: + or - 132 jts 2-3/8", 4.7 lb/ft, J-55
internally plastic coated tubing.
4. Packer: Baker Model AD-1 injection packer set @ 4215'.

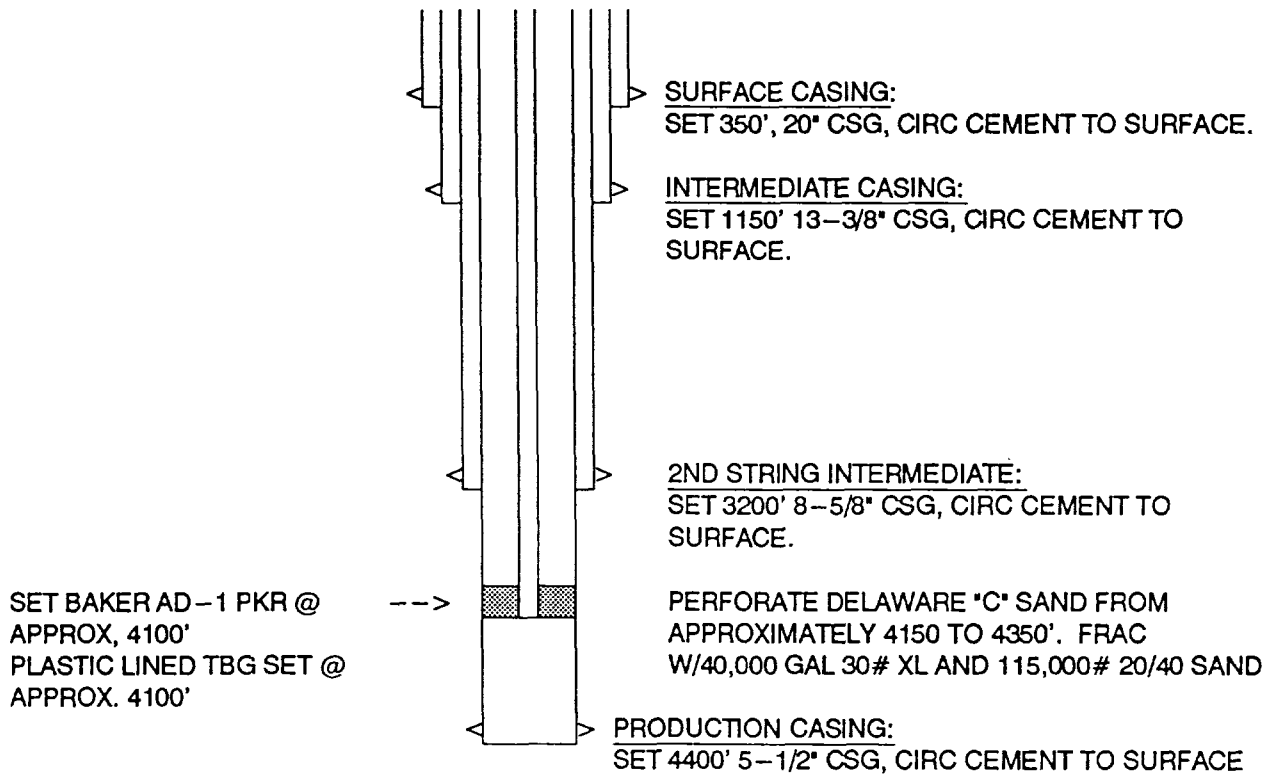
B. Other well information

1. Injection formation: Delaware
Field: Parkway
2. Perforated interval will be between 4266-4350'.
3. This well was originally drilled as an oil producer.
4. The original completion at 4118-4146' will be cement
squeezed with at least 100 sacks of cement.
5. Within the area of this project the Yates formation is
marginally productive at a depth of 1440'.

SIETE OIL & GAS CORPORATION

TYPICAL INJECTOR FOR PARKWAY WATERFLOOD

ELEVATION: 3310' GR



DRAWN BY: BJG

TD: 4400'

PARKWAY WATERFLOOD UNIT

TYPICAL INJECTION WELL

NMOCD Form C-108 Section III

III. Data on injection well(s)

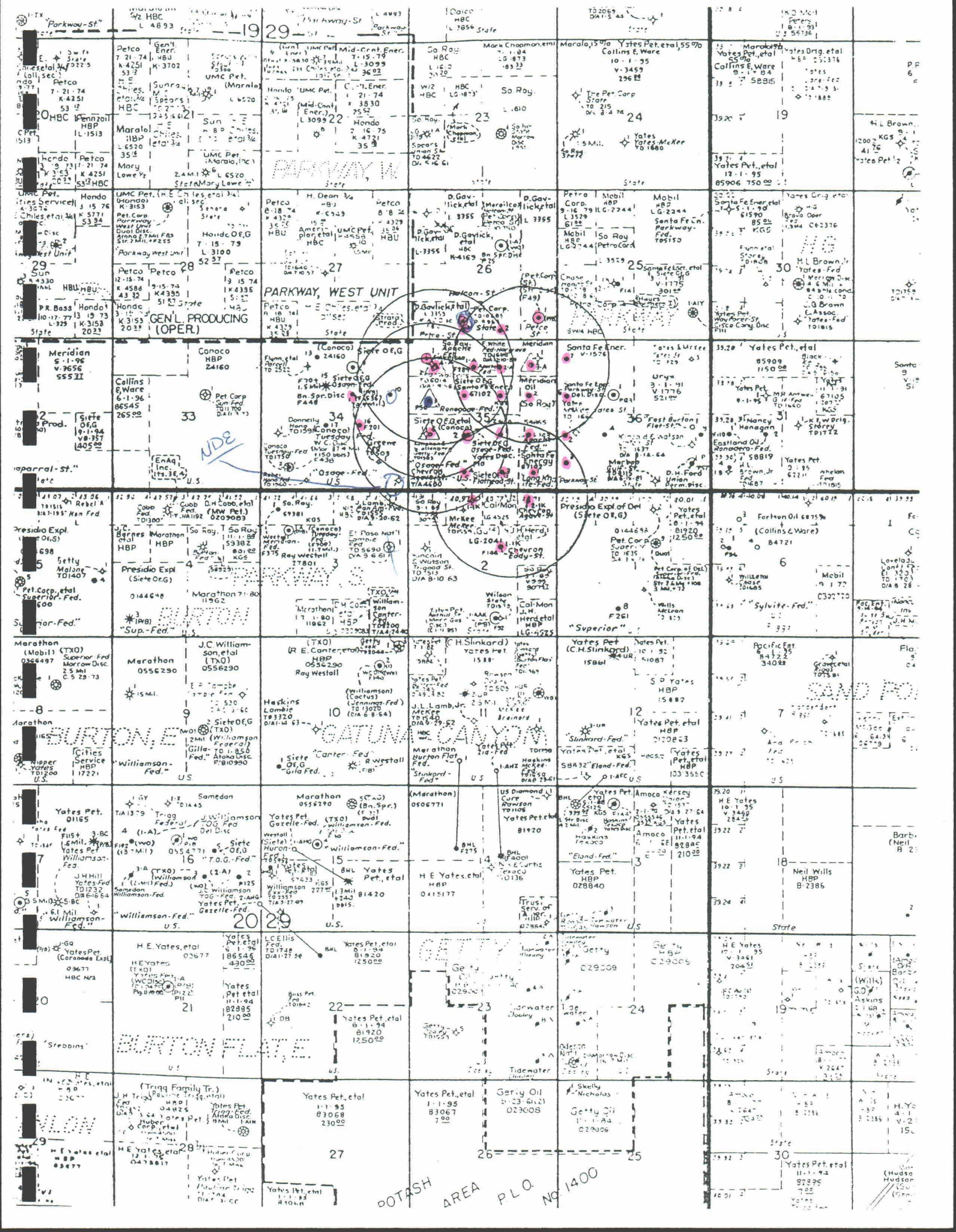
A. Injection well information (see attached schematic)

Tabular data

1. Lease: Parkway Waterflood Unit
Well No: Typical new well.
Location: Various
2. Casing: 20" surface @ 300', circ cement to surface.
13-3/8" intermediate @ 1150', circ cement to surface.
8-5/8" intermediate @ 3200', circ cement to surface
5-1/2" production @ 4400', circ cement to surface.
3. Injection tubing: + or - 128 jts 2-3/8", 4.7 lb/ft, J-55 internally plastic coated tubing.
4. Packer: Baker Model AD-1 injection packer set @ 4100'.

B. Other well information

1. Injection formation: Delaware
Field: Parkway
2. Perforated interval well be between 4150 and 4350' depending on the well location.
3. New injection wells will be drilled for the purpose of injection.
4. There will be no other perforated or tested intervals in the new injection wells.
5. Within the area of this project the Yates formation is marginally productive at a depth of 1440'. This formation will have 2 strings of casing across it.



[illegible]

PARKWAY WATERFLOOD

STATUS	WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD	PBTD	COMP. INTERVAL	FORM.	CASING PROGRAM
ACTIVE	RENEGADE FED #3	SIETE	35E 19S 29E 2230 FN & 760 FW	OIL	11/15/88	1/26/89	5000'	4298'	4127-4142'	DELA	13 3/8" @ 363' W/700 SXS 8 5/8" @ 3202' W/1790 SXS 5 1/2" @ 5000' W/450 SXS
ACTIVE	RENEGADE FED #1	SIETE	35F 19S 29E 1980 FN & 1980 FW	OIL	9/16/88	10/22/88	5800'	5752'	3940-4058'	DELA	13 3/8" @ 357' W/665 SXS 5 1/2" @ 5795' W/2915 SXS
ACTIVE	RENEGADE FED #2	SIETE	35G 19S 29E 1980 FN & 1980 FE	OIL	11/16/88	12/3/88	5000'	4958'	4190-4211'	DELA	13 3/8" @ 365' W/500 SXS 8 5/8" @ 3201' W/790 SXS 5 1/2" @ 5000' W/350 SXS
ACTIVE	APACHE FED #2	MERIDIAN	35H 19S 29E 1980 FN & 990 FE	OIL	3/9/89	4/18/89	4549'	4492'	4176-4210'	DELA	13 3/8" @ 344' W/625 SXS 8 5/8" @ 3200' W/2300 SXS 5 1/2" @ 4500' W/650 SXS
ACTIVE	APACHE FED #1	MERIDIAN	35I 19S 29E 1980 FS & 990 FE	OIL	12/12/88	2/1/89	4500'	4453'	4182-4218'	DELA	13 3/8" @ 365' W/805 SXS 8 5/8" @ 3200' W/2300 SXS 5 1/2" @ 4500' W/650 SXS
ACTIVE	OSAGE FED #1	SIETE	35J 19S 29E 1980 FS & 1980 FE	OIL	7/18/88	8/12/88	5910'	5848'	4135-4168'	DELA	13 3/8" @ 353' W/350 SXS 8 5/8" @ 3193' W/2860 SXS 5 1/2" @ 5908' W/620 SXS
ACTIVE	OSAGE FED #2	SIETE	35K 19S 29E 1980 FS & 1980 FW	OIL	10/2/88	10/24/88	5000'	4948'	4157-4187'	DELA	13 3/8" @ 363' W/740 SXS 5 1/2" @ 4993' W/1550 SXS
T & A	OSAGE FED #7	SIETE	35K 19S 29E 1980 FS & 2080 FW	OIL	1/25/89	2/18/89	1705'	1668'	1434-1449'	YATES	13 3/8" @ 350' W/400 SXS 5 1/2" @ 1700' W/410 SXS
ACTIVE	OSAGE FED #5	SIETE	35L 19S 29E 1980 FS & 760 FW	OIL	11/30/88	1/10/89	5000'	4958'	4135-4150'	DELA	20" @ 173' W/200 SXS 13 3/8" @ 364' W/500 SXS 8 5/8" @ 3200' W/800 SXS 5 1/2" @ 5000' W/450 SXS
ACTIVE	OSAGE FED #4	SIETE	35N 19S 29E 660 FS & 1980 FW	OIL	12/1/88	12/30/88	5000'	4948'	4018-4120'	DELA	13 3/8" @ 381' W/400 SXS 8 5/8" @ 3200' W/1405 SXS 5 1/2" @ 5000' W/420 SXS
ACTIVE	OSAGE FED #3	SIETE	35O 19S 29E 660 FS & 1980 FW	OIL	11/2/88	11/22/88	5000'	4933'	4201-4222'	DELA	13 3/8" @ 360' W/755 SXS 8 5/8" @ 3218' W/2295 SXS 5 1/2" @ 5000' W/400 SXS
ACTIVE	LONGKNIFE 35 #1	SANTA FE	35P 19S 29E 660 FS & 810 FE	OIL	12/13/88	3/1/89	6000'	5980'	5930-5936'	DELA	10 3/4" @ 370' W/350 SXS 7" @ 3200' W/100 SXS 4 1/2" @ 4850' W/450 SXS

PARKWAY WATERFLOOD

STATUS	WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD	PBTD	COMP. INTERVAL	FORM.	CASING PROGRAM
ACTIVE	PARKWAY 36 #7	SANTA FE	36D 19S 29E 660 FN & 330 FW	OIL	9/14/89	12/1/89	4850'	4694'	4216-4390'	DELA	11 3/4" @ 370' W/500 SXS 7" @ 3200' W/271' SXS
ACTIVE	PARKWAY 36 #6	SANTA FE	36E 19S 29E 1980 FN & 330 FW	OIL	5/11/89	9/4/89	4790'	4464'	4360-4512'	DELA	4 1/2" @ 4850' W/450 SXS 11 3/4" @ 406' W/750 SXS 7" @ 3184' W/2235 SXS
ACTIVE	PARKWAY 36 #4	SANTA FE	36E 19S 29E 1980 FN & 1980 FW	OIL	12/3/86	3/7/87	12100'	3902'	3649-3661'	CANYON	4 1/2" @ 4790' W/580 SXS 13 3/8" W 324' W/575 SXS 8 5/8" @ 3260' W/4935 SXS 5 1/2" @ 3993' W/385 SXS
ACTIVE	PARKWAY 36 #9	SANTA FE	36L 19S 29E 1980 FS & 330 FE	OIL	11/16/89	12/31/89	4660'	4617'	3747-3875'	DELA	20' 2 3/70' W/450 SXS 10 3/4" @ 1332' W/880 SXS 7" @ 3210' W/670 SXS
ACTIVE	PARKWAY 36 #4	SANTA FE	36K 19S 29E 1980 FS & 1650 FW	OIL	7/26/89	9/22/89	5000'	4403'	4266-4326'	DELA	4 1/2" @ 4660' W/380 SXS 11 3/4" @ 366' W/260 SXS 7" @ 3187' W/461' 2 SXS
ACTIVE	PARKWAY 36 #2	SANTA FE	36L 19S 29E 1980 FS & 330 FW	OIL	3/10/89	5/3/89	5000'	4903'	4006-4237'	DELA	4 1/2" @ 5000' W/580 SXS 11 3/4" @ 415' W/795 SXS 7" @ 3200' W/3835 SXS
ACTIVE	PARKWAY 36 #3	SANTA FE	36M 19S 29E 990 FS & 330 FW	OIL	5/2/89	7/17/89	5000'	4350'	4261-4327'	DELA	4 1/2" @ 4980' W/700 SXS 11 3/4" W 365' W/715 SXS 7" @ 3185' W/2135 SXS
INACTIVE	AGAVE IK ST #1	CHEVRON	2C 20S 29E 330 FN & 2310 FW	OIL	8/29/89	7/18/89	4600'	3665'	3747-4458'	DELA	20" @ 450' W/125 SXS 13 3/8" @ 1159' W/1350 SXS 8 5/8" @ 3670' W/1600 SXS
ACTIVE	EDDY IK ST #1	CHEVRON	2G 20S 29E 1980 FN & 1980 FE	OIL	9/17/89	10/29/89	10850'	6250'	6050-6104'	BS	LNR 5 1/2" @ 3350-4600 W/250 S 30" @ 40' CIRC CMT. 20" @ 450 W/1300 SXS 13 3/8" @ 1165' W/1140 SXS
ACTIVE	MERIDIAN #1	WESTALL	3D 20S 29E 660 FN & 660 FW	OIL	10/31/89	6/2/90	9500'	8070'	7930-8177'	BS	8 5/8" @ 3510' W/1400 SXS 5 1/2" @ 6250' W/1060 SXS 16" @ 265 2/280 SXS 11 3/4" @ 1454' W/720 SXS 8 5/8" @ 3212' W/1500 SXS 5 1/2" @ 8275' W/728 SXS

PARKWAY WATERFLOOD

STATUS	WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD	PBTD	COMP. INTERVAL	FORM.	CASING PROGRAM
ACTIVE	STATE 25 COM #1	SOUTHLAND ROYALTY	25K 19S 29E 1980 FS & 2130' FW	OIL	8/21/79	2/11/80	12040'	11295'	10564 - 732'	STRAWN	11 3/4" @ 412' W/400 SXS 8 5/8" @ 4000' W/1500 SXS 4 1/2" @ 12040' W/1085 SXS
ACTIVE	HALCON ST #1	STRATA	26G 19S 29E 1980' FN & 1980' FE	OIL	8/21/88	8/30/88		8372'	8088 - 8248'	BS	11 3/4" @ 365' W/350 SXS 8 5/8" @ 3135' W/3200 SXS 5 1/2" @ 8412' W/500 SXS
ACTIVE	PETCO ST COM #3	STRATA	26N 19S 29E 330 FS & 1980 FW	OIL	12/6/89	1/17/90	4740'	NA	4316 - 4458'	DELA	13 3/8" @ 338' W/350 SXS 8 5/8" @ 3325' W/2930 SXS 5 1/2" @ 4740' W/300 SXS
P & A	PETCO ST COM #2	PETCO	26N 19S 29E 660 FS & 1980 FW	OIL	5/24/71	7/4/71	10685'	9651'	9622 - 9646'	WOLF	11 3/4" @ 605' W/600 SXS 8 5/8" @ 3800' W/700 SXS 4 1/2" @ 9779' W/360 SXS
ACTIVE	HALCON ST #2	STRATA	26O 19S 29E 330 FS & 1980 FE	OIL	6/27/89	8/15/89	4730	4535'	4244 - 4258'	DELA	13 3/8" @ 357' W/350 SXS 8 5/8" @ 3285' W/300 SXS 5 1/2" @ 4730' W/250 SXS
ACTIVE	PETCO ST COM #1	PETCO	26P 19S 29E 760 FS & 660 FE	OIL	8/26/70	2/9/89	11880'	9000'	10655 - 659'	STRAWN	11 3/4" @ 600' W/600 SXS 8 5/8" @ 4090' W/600 SXS 5 1/2" @ 10844' W/400 SXS
ACTIVE	OSAGE FED #9	SIETE	34B 19S 29E 990 FS & 1980 FE	OIL	8/3/89	9/9/89	9400'	9358'	9256 - 9281'	WOLF	20" @ 343' W/615 SXS 13 3/8" @ 1141' W/1000 SXS 8 5/8" @ 3200' W/1050 SXS 5 1/2" @ 9400' W/700 SXS
ACTIVE	OSAGE FED #13	SIETE	34C 19S 29E 660 FN & 1980 FW	OIL	11/3/89	12/20/89	9400'	7200'	5595 - 5623'	BS	20" @ 344' W/660 SXS 13 3/8" @ 1141' W/1000 SXS 8 5/8" @ 3169' W/650 SXS 5 1/2" @ 9400' W/1685 SXS
ACTIVE	OSAGE FED #15	SIETE	34E 19S 29E 1650 FN & 2310 FW	OIL	1/16/90	2/3/90	8300'	8261'	5650 - 5623'	BS	20" @ 360' W 400 SXS 13 3/8" @ 1120' W/1000 SXS 8 5/8" @ 3200' W/750 SXS 5 1/2" @ 8300' W/1120 SXS
ACTIVE	OSAGE FED #8	SIETE	34G 19S 29E 1980 FN & 1980 FE	OIL	4/18/89	6/15/89	11900	11856'	5343 - 5256'	DELA	20" @ 340' W/635 SXS 8 5/8" @ 3200' W/750 SXS 5 1/2" @ 11900 W/2450 SXS

PARKWAY WATERFLOOD

STATUS	WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD	PBTD	COMP. INTERVAL	FORM.	CASING PROGRAM
ACTIVE	OSAGE FED #10	SIETE	34H 19S 29E 1980 FN & 1980 FE	OIL	9/15/89	11/17/89	9500'	7239'	7034--7192'	BS	20" @ 347' W/510 SXS 13 3/8" @ 1150' W/750 SXS 8 5/8" @ 3200' W/1175 SXS 5 1/2" @ 9500' W/1300 SXS
ACTIVE	OSAGE FED #16	SIETE	34J 19S 29E 2310' FS & 1750' FE	OIL	2/10/90	3/28/90	8300'	8256'	7002--7072'	BS	20" @ 358' W/775 SXS 13 3/8" @ 1150' W/800 SXS 8 5/8" @ 3200' W/1350 SXS 5 1/2" @ 8300' W/925 SXS
ACTIVE	OSAGE FED #17	SIETE	34K 19S 29E 2310 FS & 2310 FW	OIL	11/12/90	1/20/91	9500'	8200'	6974--6991'	BS	20" @ 366' W/800 SXS 13 3/8" @ 1120' W/750 SXS 8 5/8" @ 3200' W/1400 SXS 5 1/2" @ 8243' W/990 SXS
ACTIVE	APACHE A FED #3	MERIDIAN	35A 19S 29E 890FN & 990 FE	OIL	3/22/89	4/12/89	4550'	4501'	4221--4239'	DELA	13 3/8" @ 359' W/955 SXS 8 5/8" @ 3200' W/1885 SXS 5 1/2" @ 4549' W/400 SXS
ACTIVE	APACHE A FED #2	MERIDIAN	35B 19S 29E 990 FN & 1980 FE	OIL	4/3/89	4/22/89	4550'	4504'	4136--4229'	DELA	13 3/8" @ 365' W/378 SXS 8 5/8" @ 3210' W/2300 SXS 5 1/2" @ 4550' W/500 SXS
ACTIVE	APACHE A FED #1	MERIDIAN	35C 19S 29E 990 FN & 2310 FW	OIL	4/13/89	6/16/89	4550'	4546'	3949--4264'	DELA	13 3/8" @ 372' W/725 SXS 8 5/8" @ 3200' W/2700 SXS 5 1/2" @ 4550' W/540 SXS
ACTIVE	APACHE A FED #4	MERIDIAN	35D 19S 29E 990 FN & 940 FW	OIL	7/13/89	8/16/89	4550'	4505'	4295--4461'	DELA	13 3/8" @ 353' W/465 SXS 8 5/8" @ 3200' W/4145 SXS 5 1/2" @ 4550' W/425 SXS
ACTIVE	TUESDAY A FED #1	WESTALL	3E 20S 29E 1400 FN & 990 FW	OIL	4/28/86	7/10/86	11700	9613'	9310--9378'	BS	16" @ 300' W/505 SXS 9 5/8" @ 3230' W/2365 SXS 7" @ 9613' W/1360 SXS
ACTIVE	WAYFARER A ST #1	YATES	25P 19S 29E 990 FS & 660 FE	OIL	2/28/91	6/23/91	12140'	10640'	10387--10394'	CISCO CANYON	20" @ 370' W/1000 SXS 13 3/8" @ 1372' W/1400 SXS 8 5/8" @ 3482' W/2250 SXS 5 1/2" @ 12140' W/2125 SXS
ACTIVE	PARKWAY WEST UNIT #10	UMC PET	27G 19S 29E 1980 FN & 1980 FE	OIL	11/23/91	2/10/82	11670'	11580'	11087--11466'	MORROW	11 3/4" @ 330' W/350 SXS 8 5/8" @ 3116' W/1960 SXS 4 1/2" @ 11670' W/1020 SXS

PARKWAY WATERFLOOD

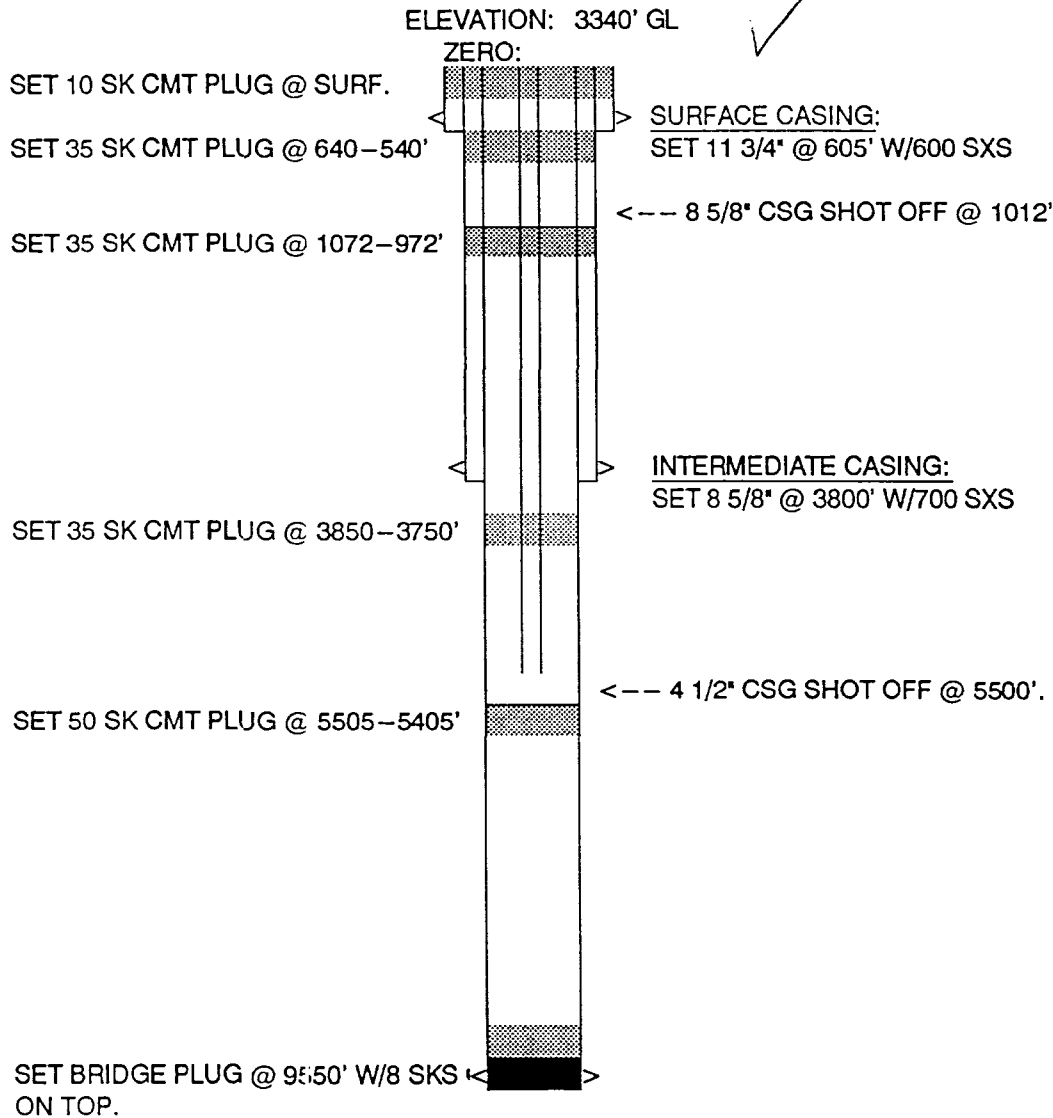
STATUS	WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD	PBTD	COMP. INTERVAL	FORM.	CASING PROGRAM
SWD	TUESDAY FED #1	SIETE	34M 19S 29E 810 FS & 990 FW	OIL	1/11/85	5/16/85	12000'	11820'	6520-6614'	BS	13 3/8" @ 1120' W/700 SXS 9 5/8" @ 2972' W/775 SXS 7" @ 11908' W/2000 SXS
ACTIVE	SUPERIOR FED #9	PRESIDIO	1G 20S 29E 1830 FN & 1980 FE	OIL	12/28/90	4/21/91	12100'	11805'	10770-10824' 11226-11233'	STRAWN ATOKA	20" @ 467' W/1225 SXS 13 3/8" @ 1162' W/1125 SXS 8 5/8" @ 3450' W/1925 SXS 5 1/2" @ 11892' W/1700 SXS
ACTIVE	SUPERIOR FED #8	PRESIDIO	1N 20S 29E 990 FS & 2130 FW	OIL	4/5/90	6/29/90	11908'	11050'	10755-70770'	STRAWN	20" @ 456' W/820 SXS 13 3/8" @ 1158' W/795 SXS 8 5/8" @ 3450' W/1560 SXS 5 1/2" @ 11899' W/1710 SXS
ACTIVE	ANTHILLAAK ST #1	YATES	2O 20S 29E 660 FS & 2150 FE	OIL	8/31/84	1/17/85	12000'	11815'	10655-10732'	STRAWN	20" @ 40' CIRC CMT. 13 3/8" @ 635' W/615 SXS 7 5/8" @ 2662' W/3050 SXS 4 1/2" @ 12150' W/575 SXS
ACTIVE	FLATHEAD ST #1	SIETE	2B 20S 29E 330 FN & 1650 FE	OIL	7/26/90	9/3/90	4500'	4455'	4118-4146'	DELA	20" @ 340' W/570 SXS 13 3/8" @ 1250' W/930 SXS 8 5/8" @ 3000' W/1100 SXS 5 1/2" @ 4500' W/600 SXS
P & A	GETTY #1	LINEHAM & STOLTENBERG	35L 19S 29E 1980 FS & 660 FW	OIL	5/11/60	5/30/60	1605'	NA	NA	YATES	10" @ 160'/SET. 8 5/8" @ 260'/SET
D & A	APACHE 'A' FED #5	SOUTHLAND ROYALTY	35D 19S 29E 890' FN & 840' FE	OIL	5/2/91	1/25/91	1600'	1540'	NONE	YATES	13 3/8" @ 220' W/350 SXS 8 5/8" @ 1470' W/425 SXS
P & A	TRIGOOD ST #1	KINCAID & WATSON	2E 20S 29E 1980' FN & 660' FW	OIL	7/20/62	8/10/63	1513'	NA	NONE	N/A	8 5/8" @ 357' W/100 SXS 4 1/2" @ 1513' W/200 SXS
P & A	#1 - 35 FED. WALTER	UNION OIL OF CALIF.	35D 19S 29E 660' FN & 660' FW	OIL	11/22/55	1/9/56	6014'	NA	NONE	DELA	11 3/4" @ 153' W/150 SXS 8 5/8" @ 1200' W/250 SXS 5 1/2" @ 4700' W/225 SXS
P & A	LAMBIE FED #1	EPNG & TX CRUDE	3H 20S 29E 1980' FN & 660 FE	OIL	7/24/91	9/6/61	5690'	NA	NONE	BS	13 3/8" @ 304' W/400 SXS
T & A	PARKWAY 36-10	SANTA FE	36I 19S 29E 2240' FS & 660' FE	OIL	2/24/91	4/24/91	11354'	11260'	10853-58' 10798-851' 10698-714'	STRAWN	13 3/8" @ 1348' 8 5/8" @ 3198' 5 1/2" @ 11354'

THE PETROLEUM CORPORATION

WELL: PETCO STATE COM #2
FIELD: PARKWAY
INTERVAL: WOLFCAMP
Comp: 7/4/71
IP: N/A
Spudded: 5/24/71

LOCATION:
660' FSL & 1980' FWL
SEC 26 T19 R29
EDDY COUNTY, NM

API #:



DRAWN BY: BJG

TD: 10685
PBTD: 9651'

NO. OF COPIES RECEIVED	2
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FILE	1
U.S.G.S.	
LAND OFFICE	
OPERATOR	

RECEIVED
NEW MEXICO OIL CONSERVATION COMMISSION

FEB 24 1972

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease	
State <input checked="" type="checkbox"/>	Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. L-3355	

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT --" (FORM C-101) FOR SUCH PROPOSALS.)

1. <input checked="" type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER		7. Unit Agreement Name
2. Name of Operator THE PETROLEUM CORPORATION		8. Farm or Lease Name Petco State Com.
3. Address of Operator 3303 Lee Parkway, Dallas, Texas 75219		9. Well No. 2
4. Location of Well UNIT LETTER N 660 FEET FROM THE South LINE AND 1980 FEET FROM West LINE, SECTION 26 TOWNSHIP 19 RANGE 29 N.M.P.M.		10. Field and Pool, or Wildcat Parkway Wolfcamp
15. Elevation (Show whether DF, RT, GR, etc.) GL-3340		12. County Eddy

16.

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input checked="" type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103.

1. Loaded hole w/gel mud.
2. Set bridge plug at 9550' & dump 8 sxs. cement on top.
3. Shot 4-1/2" casing at 5500' & pulled 5500' of 4-1/2" casing.
4. Set 50 sack cement plug 5505 to 5405 feet.
5. Set 35 sack cement plug 3850 to 3750 feet.
6. Shot 8 5/8" casing at 1012 feet and pulled 1012 feet of 8-5/8" casing.
7. Set 35 sack cement plug 1072 to 972 feet.
8. Set 35 sack cement plug 640 to 540 feet.
9. Set 10 sack cement plug at surface.
10. Installed 4 inch marker **2-14-72**
Prepare to clean up location -- will advise when ready for inspection.

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

SIGNATURE <u><i>Sally C. Shaw</i></u>	TITLE <u>Petroleum Engineer</u>	DATE <u>Feb. 21, 1972</u>
APPROVED BY <u><i>William C. McCombs</i></u>	TITLE <u>OIL AND GAS INSPECTOR</u>	DATE <u>JUN 14 1972</u>

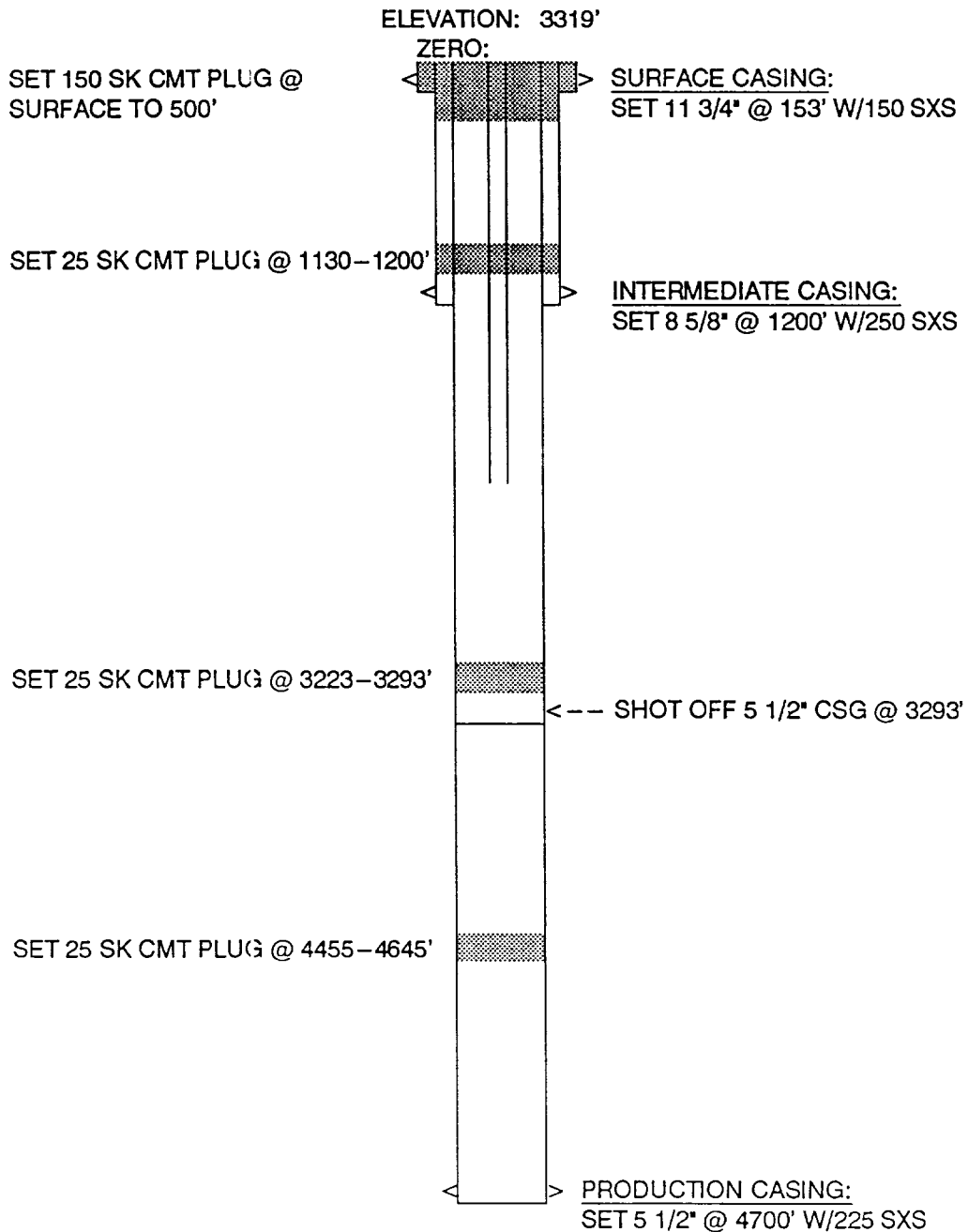
CONDITIONS OF APPROVAL, IF ANY:

SIETE OIL & GAS CORPORATION

WELL: #1-35 FEDERAL WALTER
FIELD: WILDCAT
INTERVAL: BONE SPRING
Comp: 1/9/56
IP: NONE
Spudded: 11/22/55

LOCATION:
660' FN & 660' FW
SEC 35 20S 29E
EDDY COUNTY, NM

API #:



DRAWN BY: BJG

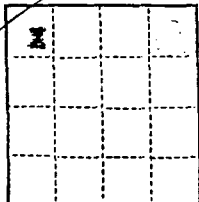
TD: 6014'

(SUBMIT IN TRIPLICATE)

Land Office

Lease No.

Unit

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL.....	SUBSEQUENT REPORT OF WATER SHUT-OFF.....
NOTICE OF INTENTION TO CHANGE PLANS.....	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING.....
NOTICE OF INTENTION TO TEST WATER SHUT-OFF.....	SUBSEQUENT REPORT OF ALTERING CASING.....
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL.....	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR.....
NOTICE OF INTENTION TO SHOOT OR ACIDIZE.....	SUBSEQUENT REPORT OF ABANDONMENT.....
NOTICE OF INTENTION TO PULL OR ALTER CASING.....	SUPPLEMENTARY WELL HISTORY.....
NOTICE OF INTENTION TO ABANDON WELL.....	

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Well No. 1-21 is located 560 ft. from [N] line and 560 ft. from [W] line of sec. 35

1/4 Sec. and Sec. No. 1-10-4 1-10-4 1-10-4
(Range) (Meridian)

Willcox Willcox Willcox
(Field) (County or Subdivision) (State or Territory)

The elevation of the derrick floor above sea level is 309 ft. (D.F.)

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Spotted 25 cu. cement plug 1437-1443'. Shut off 3-1/8" casing at 301' and recovered 303' to 3-1/8" casing.

Spotted 25 cu. cement plugs at 302-303' and 1130-1131' and 150 cu. cement from surface to 303'.

The well was plugged and abandoned January 10, 1956, and marked with a 4" C.D. pipe of pipe rising vertically 4' above ground level.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Union Oil Company of CaliforniaAddress 610 West Texas AvenueMidland, Texas

By

Title

Assistant Division Engineer

ILLEGIBLE

EDDY

FROM WILDCAT

STATEN M. KROENLEIN 2310-56

• • •

Union Oil Co. of Calif - #1-35 - Fed. Reg. 33191

Walter

660'FWL & FWL

Sec. 35, T. 19S, R. 29E

• • •

CASE RECORD

11 3/4- 153-150
5 5/8-1200-250
5 1/2-4700-225

1000

Anhy	195
2/Salt	257

5/Salt 1143

Yates	1335
-------	------

De la sd. 3940

Bone Springs 5690

Pisa

Sub. 100% SW

Sub. 100% SW

CONT'D. PAGE 2

EDDY, N.M. SEC: 35-19S-29E
Union Oil Co. - #1-35 - Fed Walter

K-23.
PAGE 2

Crd. 1527-79 rec. 52'; 10' hard dse dolo, 5-1/2' dolo
fxln stn. on vert fracs. 16' dolo shale ptgs. 6-1/2'
sand grey some fluor por bldg. oil, 4' dolo hard
dse NS. 10' lite grey sand, fluor bldg oil.

Crd. 3375-3424 rec. 49' dark grey fx dse, lime sulf. odor
no show.

Crd. 3983-4033 rec. 50' grey fg. sand w/sho of salt wtr.
DST 3952-4033 op 2 hrs. rec. 1150' MCSW w/NS FP 60-595#
SIP 1445# 20 mins,

DST 4204-63 op 2 hrs. rec. 100' SO&HCCM, FP 70-80# SIP
95# 20 mins.

Took sidewall cores 3835-4906, SW Cores fgs w/SSG.

4616' fg sd stn, fluor, 4621' fg sd sli stn. 4623' fg sd goo
fluor, 4625' fg. sd SSG. 4627' fg sd stn, fluor
4629' fg sd sli fluor 4635' fg sd no sho. 4638' fg sd
no sho. 4649' fg w/SSG, 4661' fg sd w/SSG, 4667' fg sd
shaley NS, 4906' fg sd NS.

CONT'D ON PAGE 3

, M.M. SEC: 35-193-29E
on Oil - #1-35 - Fed. Walter

K-2300-56
PAGE 3

4610-32 pkr failed str pkr.

ST 4611-4647 op 1 hr 30 mins rec. 150' s oil & GCM 5 to
10% oil FP 50# SIP 1225# 20 mins.

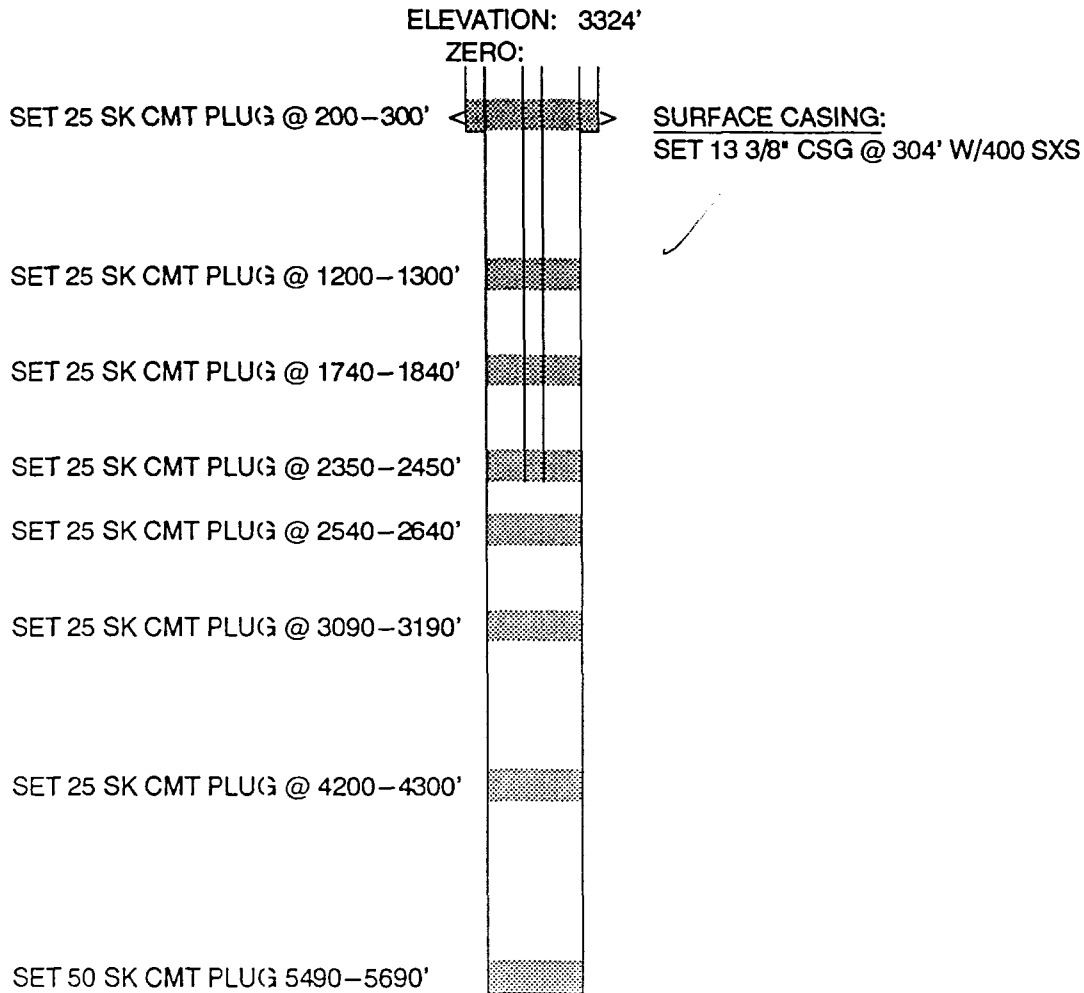
rf 68/4612-29 A/500 MCA, SF 10,000 4612-29 Swb part of
load swb dry.

SIETE OIL & GAS CORPORATION

WELL: LAMBIE #1
FIELD: WILDCAT
INTERVAL: BONE SPRING
Comp: 9/6/61
IP:
Spudded: 7/24/61

LOCATION:
1980' FN & 660' FE
SEC 3 20S 29E
EDDY COUNTY, NM

API #:



DRAWN BY: BJC

TD: 5690'

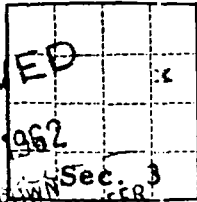
COUNTY	Eddy	FIELD	Wildcat	STATE	N.M.	NO.	
OPR	El Paso Natural Gas Co. & Texas Crude Oil Co.						MAP
NO	1	LSE	Lambie				
SEC	3	T.	20S	BLK. R	29E	SUR.	CO-ORD
LOC	1980' fr N Line & 660' fr E Line of Sec.						
MI.		FROM	P&A	CLASS.		EL.	3324'
SPUD.	7-24-61	COMP.	9-6-61	FORMATION	DATUM	FORMATION	DATUM
LOG	LOG: B Spgrs 5672'						
CSG. & SX.	13 3/8" 304' 400'						
TBG	DEPTH	SIZE					
LOGS	EL	GR	RA	IND	HC	A	
PROD INT.	(DAILY RATE)	BS&W	CH	GCR	STY	G. P.	T. P.

PLUGGED & ABANDONED

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CON-	PROP DEPTH	12,000'	TYPE
DATE	F.R. 7-27-61		Devonian

7-31-61 Drlg. 2145' anhy. & dolo.
 8-2-61 Amended proposed depth, was 5500 Bone Springs.
 8-3-61 Drlg. 2590' dolo.
 8-14-61 Drlg. 3750' dolo.
 8-21-61 Drlg. 4456' dolo. & sd.
 8-28-61 Drlg. 5142' dolo.
 9-5-61 TD 5690' dolo., WOO. Ran logs at TD
 9-11-61 TD 5690' dolo., PLUGGED & ABANDONED.
 No tests.

APPROVED
JUN 1 1962
A. K. BROWN
ACTING DISTRICT ENGINEER

T-20-S

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYLand Office New Mexico
Lease No. NM 01062
Unit Lambie Federal

R-29-E

JUN 4 1962

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL.....	SUBSEQUENT REPORT OF WATER SHUT-OFF.....
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NOTICE OF INTENTION TO SHOOT OR ACIDIZE.....	SUBSEQUENT REPORT OF ABANDONMENT..... X
NOTICE OF INTENTION TO PULL OR ALTER CASING.....	SUPPLEMENTARY WELL HISTORY.....
NOTICE OF INTENTION TO ABANDON WELL.....	

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Lambie Federal #1

September 7, 1961

Well No. 1 is located 1980 ft. from N line and 660 ft. from E line of sec. 3SE/4 NE/4
($\frac{1}{4}$ Sec. and $\frac{1}{4}$ Sec. No.)T-20-S
(Twp.)R-29-E
(Range)NMPM
(Meridian)Wildcat
(Field)Eddy
(County or Subdivision)New Mexico
(State or Territory)The elevation of the derrick floor above sea level is 3515.1 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

The above-described well was plugged and abandoned on September 6, 1961, setting the following cement plugs: (8 plugs from 5690' to 300')

1. 5690' to 5490' w/50 sx
2. 4300' to 4200' w/25 sx
3. 3190' to 3090' w/25 sx
4. 2640' to 2540' w/25 sx
5. 2450' to 2350' w/25 sx
6. 1840' to 1740' w/25 sx
7. 1300' to 1200' w/25 sx
8. 300' to 200' w/25 sx

JAN 30 1962

SEP 14 1961

A 3" iron pipe for well identification permanently set in the surface casing.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company El Paso Natural Gas Company & Texas Crude Oil CompanyAddress 2005 Wilco BuildingMidland, Texas

By

D. E. Lockett

Title Division Petroleum Engineer

WRS COMPLETION REPORT

COMPLETIONS SEC 2 TWP 20S RGE 29E
PI# 30-T-0017 06/21/91 30-015-26170-0000 PAGE 1

NMEX EDDY * 330FNL 990FEL SEC NE NE
STATE COUNTY FOOTAGE SPOT
CHEVRON USA D
OPERATOR WELL CLASS INIT FIN
2 AGAVE "IK" STATE
WELL NO. LEASE NAME

OPER ELEV PARKWAY
FIELD/POOL/AREA
API 30-015-26170-0000
LEASE NO. PERMIT OR WELL I.D. NO.

06/19/1991 ROTARY VERT AB-LOC
SPUD DATE COMP. DATE TYPE TOOL HOLE TYPE STATUS
5300 DELAWARE

PROJ. DEPTH PROJ. FORM CONTRACTOR

DRILLERS T.D. LOG T.D. PLUG BACK TD OLD T.D. FORM T.D.

LOCATION DESCRIPTION


16 MI NE CARLSBAD, NM

DRILLING PROGRESS DETAILS

CHEVRON USA
BOX 1150
MIDLAND, TX 79702
915-687-7100
08/18 LOC/1989/
06/19 ABND LOC

IC# 300157017289

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 **Petroleum Information
Corporation**

PI-W
Form

SIETE OIL AND GAS CORPORATION

Parkway Waterflood Project

NMOCD Form C-108 Sections VII - XIII

VII. Injection Data

1. Injection Rates
 - a. Proposed average daily water injection is 380 BWP/D/Well.
 - b. Maximum rate of daily water injection is 500 BWP/D/Well.
2. The injection station for the gathering and processing injection water will be a closed system.
3. Injection Pressures
 - a. Proposed average daily injection pressure is 700 PSI.
 - b. Maximum daily injection pressure is 800 PSI*.

* Note: Maximum injection pressure abides by .2 PSI/Ft maximum injection pressure imposed by the NMOCD.
4. Chemical analysis of injection and formation water (see attached water analysis).
 - a. Proposed injection fluid will be produced Delaware water and water from the Tuesday Federal Salt Water Disposal Well. The Martin Water Lab analysis dated 2/12/92 , indicates no compatibility problems with mixing these two waters.
5. Water injection will be into a zone currently productive of oil and gas.

VIII. * Geologic Data: See Attached Geologic Description

- IX. The Delaware zones to be completed will be perforated and fracture stimulated similar the existing completions. We anticipate perforating the zones with 1 shot per 1-1/2 feet and fracing with 40,000 gal and 115,000# sand.
- X. Well logs for the wells to be converted have been previously submitted.

The well tests as of 1/1/92 are as follows:

	BOPD	BWPD	MCFPD	EST. CUM. PROD. MBO
APACHE 3-A	59	18	133	63
APACHE 4-A	20	40	45	17
OSAGE 5	2	20	90	55
RENEGADE 3	10	20	120	62
FLATHEAD 1	9	40	0	7

- XI. The water analysis for the shallow fresh water zone is shown on the Martin Water Lab analysis dated 2/12/92.
- XII. I, Robert Lee, a Production/Reservoir Engineer for Siete Oil and Gas Corporation and in behalf of, have compiled and examined all available geologic and engineering data and have not found any evidence of hydrologic connections between the proposed Parkway Delaware Waterflood Project injection zone and any source of underground drinking water.
- XIII. Proof of Notice - requirements
1. See attached mailing list and registered mail certificates.

GEOLOGY

The Parkway (Delaware) Field produces oil and gas from the sandstones of the Permian age Delaware Mountain Group. In the Parkway Field, the major source area for the Delaware clastics was the Pedernal Massif to the northwest. Delaware sands accumulated on and behind the Capitan, Goat Seep and Getaway carbonate shelves during Guadalupian time. As the sand load increased to the point of being hydrologically and tectonically unstable, it moved as a gravity induced density flow through gaps in the reef, down the reef slope through channels and out into the Delaware Basin depocenter. Subsequently these clastics were reworked by deep-water longshore currents forming elongated sand bodies subparallel to the basin margin.

The Parkway (Delaware) Field is a combination structural-stratigraphic trap of the upper portion of the Delaware Mountain Group clastics. The areal extent of the oil production portion of the Parkway anticlinal feature is slightly larger than one square mile. Stratigraphy plays an important role in the Parkway Field in that the Delaware sand interval is effectively divided by impermeable dolomitic shale barriers into three major reservoirs, the A, B, and C. The C reservoir is further subdivided by minor dolomitic shale barriers into the C1, C2, and C3. The C1, C2, and C3 reservoirs each have a distinct gas-oil contact. The cross-section is attached illustrating the subdivision of the Parkway (Delaware) field into the A, B, and C Sands.

The correlative well log tops for each of the Delaware A, B, and C sands were chosen by the Parkway Delaware Committee and independently verified by Michael G. Clemenson, Petroleum Geologist, retained by the Engineering Committee. A series of eight structural cross-sections through the Parkway Field were constructed to demonstrate the continuity and lateral thickness variations for each of the reservoirs, as well as to represent each interval where the wells had been perforated.

Delaware C Sand

The Delaware C Sand is a massive sand body with an overall average gross thickness of approximately 120 feet. The C Sand is the primary producing reservoir of the Parkway Field.

The top of the Delaware C Sand occurs at a subsea depth of -793 to -925 feet in the productive wells on the Parkway structure.

Figure 7 is a structure map on top of the C Sand. Seventeen wells have been perforated in the Delaware C Sand. As previously noted, the Delaware C interval is subdivided by impermeable dolomitic shale barriers into three separate reservoirs, the C1, C2, and C3.

The need to subdivide the C Sand was recognized by varying gas-oil contacts within wells completed in the C Sand. Evidence that the C1, C2, and C3 are stratigraphically separate reservoirs was based on analysis of neutron-density crossover "gas effect" and production test data provided by the operators. The field wide correlation of dolomitic shale beds within the massive C Sand further confirmed that the C Sand was actually comprised of three separate reservoirs, each with its own distinct gas-oil contact. The subsea depth of the gas-oil contacts for each of the reservoirs are as follows:

C1 - -808 feet
C2 - -825 feet
C3 - -850 feet

The average gross interval from top to base of each of the reservoirs is as follows:

C1 - 15 feet
C2 - 36 feet
C3 - 70 feet

Isopach maps are attached showing gross thickness for the C1, C2, and C3.

Net sand isolith and net pay isopach maps of each of the reservoirs were constructed using data from the results of the well-log analysis generated by Platt, Sparks and Associates, Inc. These net sand isolith maps of the Delaware C1, C2, and C3 are also attached. These maps were constructed using log analysis cutoff parameters of porosity greater than or equal to 16% and shale column less than 50%. The average net thickness for each of the reservoirs is as follows:

C1 - 6 feet
C2 - 18 feet
C3 - 43 feet

Net gas pay isopach maps of the Delaware C1, C2, and C3 are attached. The net gas pay thickness were determined using log analysis cutoff parameters of porosity greater than 16% shale volume less than 50%, and water saturation less than 55%. The thickness of the gas cap was then mapped for each reservoir using that interval above the subsea depth of the gas-oil contacts listed above for the respective reservoirs.

The average thickness of the net gas pay for each reservoir is as follows:

C1 - 5 feet
C2 - 10 feet
C3 - 8 feet

Net oil pay isopach maps for the C1, C2, and C3 reservoirs using log analysis cutoff parameters of porosity greater than 16%, shale column less than 50%, and water saturation less than 55% were constructed and are attached. The interval mapped is from the base of the gas cap (gas-oil contact) to the subsea depth where water saturation exceeds 55%. The average thickness of the net oil pay for each reservoir is as follows:

C1 - 5 feet
C2 - 16 feet
C3 - 41 feet

Isopermeability maps for the C1, C2, and C3 reservoirs, using average permeability data generated by Platt, Sparks and Associates, Inc. were constructed and are presented.

Delaware B Sand

The top of the Delaware B Sand occurs at a subsea depth of approximately -655 to -831 feet in productive wells on the Parkway structure. The average gross thickness of the B Sand is 148 feet. The average net thickness of the B Sand using log analysis cutoff parameters of porosity greater than 15% and shale volume less than 50% is 85 feet. The Delaware B Sand has an average net pay thickness of 50 feet based on log analysis cutoff parameters of 15% porosity, shale volume less than 50%, and water saturations less than 55%. Figure 23 is a structure map on top of the B Sand. The B Sand is separated from the C Sand by 5 to 20 feet of dolomitic shale. Nine wells in the Parkway Field have been perforated in the B interval.

Delaware A Sand

The top of the Delaware A sand occurs at a subsea depth of approximately -590 to -700 feet in productive wells on the Parkway structure. The average gross thickness of the Delaware A Sand is 75 feet. The average net thickness of the A Sand using log analysis cutoff parameters of porosity greater than 15% and shale volume less than 50% is 40 feet. The Delaware A Sand has an average net pay thickness of 21 feet based on log analysis cutoff parameters of porosity greater than 15%, shale volume less than

50%, and water saturations less than 55%. The A Sand is separated from the B Sand by 5 to 17 feet of shale. Five wells in the Parkway Field have been perforated in the A Sand.

Fresh Water Zones

The Rustler Formation is an overlying fresh water zone that exists from 100-200; in depth. This zone has 767 ppm chlorides and total dissolved solids of 3481 ppm. See the attached Martin Water Lab analysis on 2/12/92. There are no underlying fresh water zones in this area.

RESULT OF WATER ANALYSES

LABORATORY NO. 29253
TO: Mr. Robert Lee SAMPLE RECEIVED 2-5-92
P. O. Box 2523, Roswell NM 88202 RESULTS REPORTED 2-12-92

COMPANY Siete Oil & Gas Corporation LEASE Proposed Parkway Delaware Waterflood
FIELD OR POOL Parkway (Delaware)

SECTION BLOCK SURVEY COUNTY Eddy STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

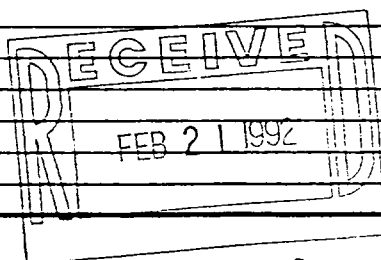
- NO. 1 Raw water - taken from Osage #8 water supply well.
NO. 2 Produced water - taken from Osage #1.
NO. 3 Disposal water - taken from Tuesday Federal Salt Water Disposal.
NO. 4 Raw water - taken from Amax water well.

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0045	1.1570	1.1352	1.1396
pH When Sampled				
pH When Received	4.73	6.94	6.96	7.68
Bicarbonate as HCO ₃	78	66	146	200
Supersaturation as CaCO ₃	---	8	12	4
Undersaturation as CaCO ₃	236	---	---	---
Total Hardness as CaCO ₃	2,040	59,000	49,000	16,000
Calcium as Ca	656	19,200	15,600	1,920
Magnesium as Mg	97	2,673	2,430	2,722
Sodium and/or Potassium	331	65,293	54,200	74,895
Sulfate as SO ₄	1,552	589	461	6,169
Chloride as Cl	767	142,038	117,892	122,153
Iron as Fe	1.0	10.8	4.1	0.04
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	3,481	229,858	190,729	208,059
Temperature °F.				
Carbon Dioxide, Calculated	0	14	23	7
Dissolved Oxygen,				
Hydrogen Sulfide	0.0	0.0	0.0	0.0
Resistivity, ohms/m at 77° F.	2.01	0.052	0.060	0.057
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks



TO: Mr. Robert Lee
P. O. Box 2523 Roswell, NM 88202

LABORATORY NO. 29253 (Page 2)
SAMPLE RECEIVED 2-5-92
RESULTS REPORTED 2-12-92

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 4

Mixed Water System

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1657	1.2273		
pH When Sampled				
pH When Received	7.66	7.82		
Bicarbonate as HCO ₃	120	102		
Supersaturation as CaCO ₃	4	0		
Undersaturation as CaCO ₃	---	---		
Total Hardness as CaCO ₃	17,000	19,500		
Calcium as Ca	2,480	920		
Magnesium as Mg	2,624	4,180		
Sodium and/or Potassium	91,035	129,126		
Sulfate as SO ₄	4,344	7,428		
Chloride as Cl	149,140	207,375		
Iron as Fe	0.54	0.54		
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	249,743	349,132		
Temperature °F.				
Carbon Dioxide, Calculated	4	3		
Dissolved Oxygen.				
Hydrogen Sulfide	0.0	0.0		
Resistivity, ohms/m at 77° F.	0.051	0.041		
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks

Letter of recommendation attached.

By

P.O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 or 563-1040

Martin Water Laboratories, Inc.
WATER CONSULTANTS SINCE 1953
BACTERIAL AND CHEMICAL ANALYSES

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

February 12, 1992

Mr. Robert Lee
Siete Oil & Gas Corporation
P. O. Box 2523
Roswell, NM 88202

Subject: Recommendation relative to Laboratory No. 29253 (2-5-92)
Proposed Parkway Delaware Waterflood.

Dear Mr. Lee:

As per your letter received 2-5-92, the objective of this study is to evaluate the compatibility between the various waters represented in the above listed analysis. Interpretations are made on the basis of water samples submitted and on the assumption that they represent the average characteristics of each water. We feel confident that these waters will likely be similar to this study; therefore, the interpretations herein should be valid. Those aspects of the study regarding the above objectives are as follows:

1. The supply water from Osage #8 shows to be compatible with all of the other individual waters. Therefore, we can consider it open regarding which water the supply water is mixed with for the purposed of compatibility. There are two factors to be considered in the supply water as follows:
 - A. Any mixture of the supply water with any of the other waters would result in a relatively low-salinity water (about one-half the salt levels of any water or waters it is to be mixed with). We are not familiar with what level of chloride would be advisable to avoid clay swelling in the area.
 - B. We would strongly consider it advisable to enclose the supply water regardless of which water or waters it is to be combined with. We feel it would be distinctly advantageous to have no oxygen in this water for factors such as preventing bacterial activity and also precipitation of iron that is present in the produced water and the disposal water.
2. In this study we have two different types of water on the basis of their calcium and sulfate content. The produced water from Osage #1 and the Tuesday Federal disposal water both have a low sulfate and a high calcium. On the other hand, the waters from Amax and the Eddy potash water well as well as the Amax lake water have a high sulfate-low calcium level. Any combination of the high sulfate-high calcium waters would result in a severe supersaturation to calcium sulfate in the mixture. Therefore, these two types of waters cannot be mixed as the resulting detrimental condition would be serious in regard to potential calcium sulfate precipitation and scaling.

3. We have made a hypothetical combination of equal quantities of all the waters represented in the study, and this combination of waters also results in a supersaturation to calcium sulfate.
4. As revealed in the above discussion, it will then only be feasible to mix the supply water with one or both of the low-sulfate waters or mix the supply water with one or all of the high-sulfate waters.
5. We would clearly not recommend the Amax lake water be used. The reason for this is that the water is at the saturation point to sodium chloride, and it would be expected to cause serious salt deposits on all of the equipment trying to handle this water. The seriousness of the condition would fluctuate substantially with temperature variations both ambient and operational.
6. We find no evidence of any incompatibility between the produced water and the Tuesday Federal disposal water; therefore, these can be mixed with one another and also with the supply water from Osage #8 without any problem regarding compatibility if the supply water is kept free of any air contamination.
7. It is considered significant that if the high-sulfate waters or any mixture of these waters with supply water is injected, they will be incompatible in situ with the natural connate water in the Delaware interval. This would be expected to be a negative influence as there may be in situ precipitation and/or calcium sulfate scaling at the producing wells.

In the composite evidence, we have attempted to present with reasonable clarification in the above discussions what the potential concerns would be regarding the compatibility of the waters involved. We are not familiar with the overall detailed circumstances and present our recommendations based solely on the least amount of incompatibility in water handling problems. With this understood, we would recommend consideration be given to using the supply water from Osage #8 and mixing it with either the produced water or water from the Tuesday Federal disposal well or both of them. We would conclude that this approach would result in a minimum amount of water handling difficulties as well as minimum incompatibility in the reservoir to be flooded. We would consider this approach sufficiently advantageous to perform tests regarding a hypothetical combination of these waters with the core that is available to see if the salinity would be adequate. If this is not completely clear or not compatible with your operation, please contact us; and we will attempt to clarify any desired points needed.

Very truly yours,



Waylan C. Martin

WCM/plm

Martin Water Laboratories, Inc.

OPERATORS WITHIN THE WATERFLOOD PROJECT AND OFFSET
OPERATORS WITHIN ONE-HALF MILE OF INJECTION WELLS

Meridian Oil, Inc.
P. O. Box 51810
Midland, Texas 79710-1810
Attn: Mo Gaddis

Yates Petroleum
Corporation
105 South Fourth Street
Artesia, New Mexico 88210

Ray Westall
P. O. Box 4
Loco Hills, NM 88255

Collins & Ware
303 West Wall Avenue
Suite 2200
Midland, Texas 79701

UMC Petroleum
1201 Louisiana, Suite 1400
Houston, TX 77002
Attn: Brian Baer

Fortson Oil Company
301 Commerce St, Ste. 3301
Fort Worth, TX 76102
Attn: Jack Evecker

Strata Production Company
700 Petroleum Building
Roswell, NM 88201
Attn: George L. Scott

Presidio Oil Company
P. O. Box 6525
Englewood, Colorado 80155-6525
Attn: Marshall Munsell, Land Manager

Santa Fe Energy Resources, Inc.
550 W. Texas Ave., Suite 1330
Midland, Texas 79701
Attn: Randy Offenberger

Chevron, Inc.
P. O. Box 1150
Midland, Texas 79702
Attn: Larry La Fleur

Conoco, Inc.
10 Desta Drive, Suite 100 W.
Midland, Texas 79705-4500
Attn: Peggy Sutko

Eastland Oil Company, Inc.
Drawer 3488
Midland, Texas 79702
Attn: Travis Reed

SURFACE OWNERS:

Department of the Interior
Bureau of Land Management
Post Office Box 1397
Roswell, New Mexico 88201-1397

Commissioner of Public Lands
State of New Mexico
Post Office Box 1148
Santa Fe, New Mexico 87504-1148

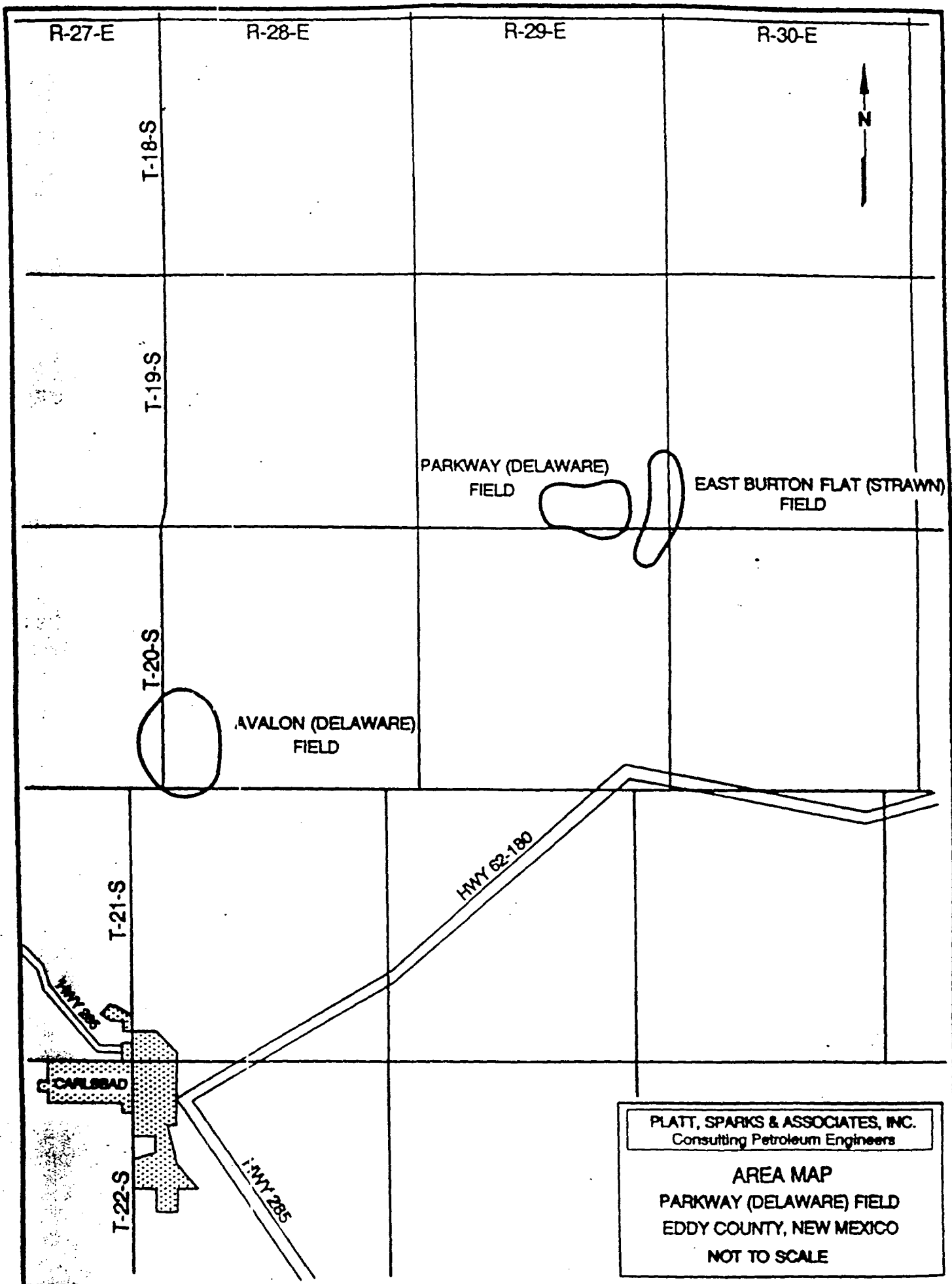


FIGURE 1

**RESERVOIR HYDROCARBON FLUID PROPERTIES
PARKWAY (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO**

OIL PROPERTIES

<u>Pressure (PSIA)</u>	<u>Oil FVF (RB/STB)</u>	<u>Solution GOR (SCF/STB)</u>	<u>Oil Viscosity (Cp)</u>
1820	1.2204	481	1.040
1700	1.2123	456	1.063
1600	1.2060	437	1.083
1500	1.1998	418	1.096
1400	1.1936	399	1.113
1300	1.1874	382	1.130
1200	1.1811	362	1.148
1000	1.1682	323	1.186
800	1.1544	282	1.229
600	1.1394	238	1.277
400	1.1228	191	1.331
200	1.1032	137	1.395
100	1.0883	102	1.446

GAS PROPERTIES

<u>Pressure (PSIA)</u>	<u>Gas FVF (RB/MCF)</u>	<u>Gas Viscosity (Cp)</u>
1800	---	.0174
1700	1.4346	.0169
1600	1.5302	.0164
1500	1.6394	.0160
1400	1.7653	.0155
1300	1.9117	.0151
1200	2.0837	.0146
1000	2.5352	.0137
800	3.2194	.0128
600	4.3712	.0118
400	6.6969	.0108
200	13.7063	.0096
100	27.7439	.0057

FIGURE 2

OIL PVT PROPERTIES

PARKWAY (DELAWARE) FIELD

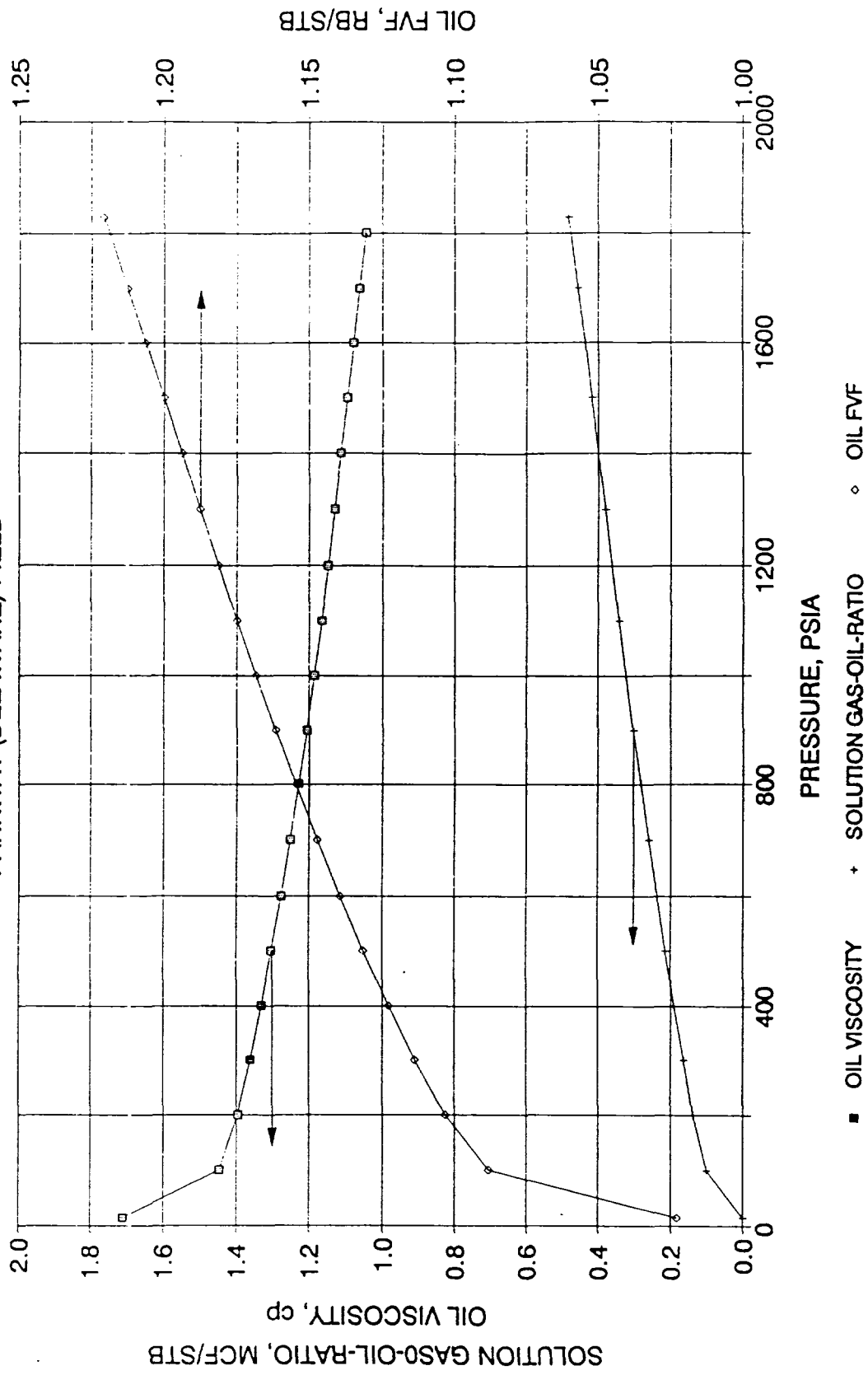


FIGURE 3

GAS PVT PROPERTIES

PARKWAY (DELAWARE) FIELD

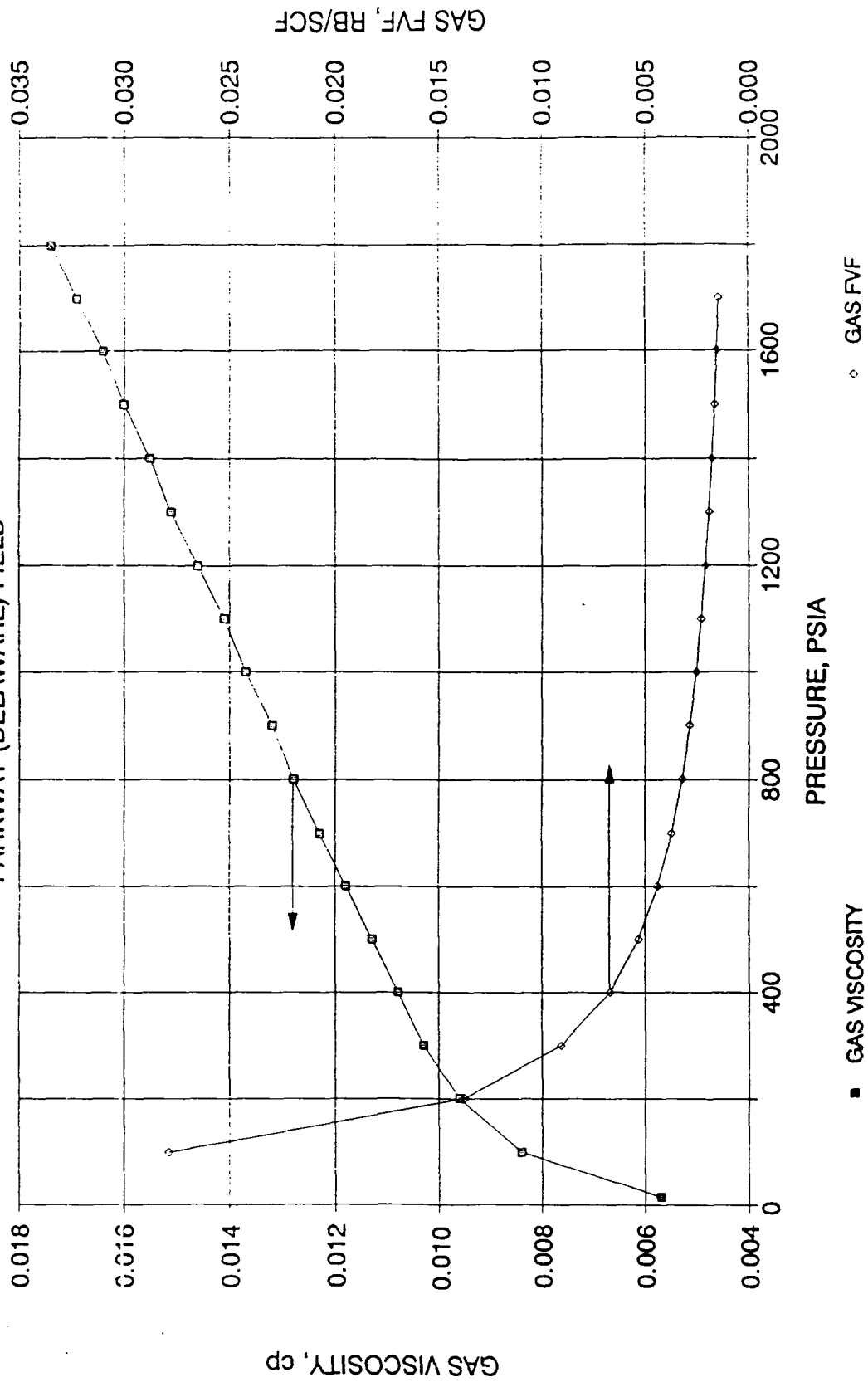


FIGURE 4

RELATIVE PERMEABILITY AND CAPILLARY PRESSURE
PARKWAY (DELAWARE) FIELD
C SAND
EDDY COUNTY, NEW MEXICO

Downstructure

S_w	K_{rw}	K_{row}	P_{cow} (psia)
0.28	.0000	1.000	65.0
0.31	.0000	.100	55.0
0.35	.0060	.080	32.0
0.40	.0100	.062	23.0
0.45	.0180	.050	18.0
0.50	.0220	.040	14.0
0.55	.0320	.030	12.0
0.60	.0410	.020	10.0
0.65	.0540	.160	9.0
0.70	.0700	.006	7.0
0.75	.0800	.000	6.0
0.80	.1000	.000	5.0

S_g	K_{rg}	K_{rog}	P_{cog} (psia)
0.00	.0000	1.000	0
0.02	.0000	.900	0
0.05	.0125	.740	0
0.10	.0150	.490	0
0.15	.0175	.200	0
0.20	.0200	.180	0
0.25	.0260	.090	0
0.30	.0350	.020	0
0.40	.0450	.000	0
0.50	.0500	.000	0
0.72	.0600	.000	0

FIGURE 5

RELATIVE PERMEABILITY AND CAPILLARY PRESSURE
PARKWAY (DELAWARE) FIELD
C SAND
EDDY COUNTY, NEW MEXICO

Upstructure

S_w	K_{rw}	K_{row}	P_{cow} (psia)
0.28	.0000	1.0000	65
0.31	.0000	.1120	55
0.35	.0020	.0850	26
0.40	.0060	.0700	21
0.45	.0110	.0580	16
0.50	.0160	.0460	12
0.55	.0240	.0360	9
0.60	.0340	.0240	8
0.65	.0450	.0160	7
0.70	.0560	.0060	6
0.75	.0680	.0000	4
0.80	.0800	.0000	3

S_g	K_{rg}	K_{rog}	P_{cog} (psia)
0.00	.0000	1.000	0
0.02	.0000	.950	0
0.05	.0125	.800	.20
0.10	.0150	.650	.25
0.15	.0175	.500	.30
0.20	.0200	.330	.35
0.25	.0260	.180	.40
0.30	.0350	.330	.45
0.40	.0450	.000	.50
0.50	.0500	.000	.55
0.72	.0600	.000	.60

FIGURE 6

SUMMARY OF RESERVOIR PRESSURE HISTORY
PARKWAY (DELAWARE) FIELD
"C" SAND
EDDY COUNTY, NEW MEXICO

WELL NAME	TYPE	TEST DATE	Gauge Pressure (psig)	SHUT-IN TIME (hrs)	Gauge Depth (ft)	Pressure Gradient (psi/ft)	MID- PERFORATION (ft)	Pressure Mid Perf (psig)	Elevation KB (ft)	Sub-SEA Mid-Perf (ft)	Oil Density (lb/ft ³)	Oil Gradient (psi/ft)	Pressure @ MID-SAND OF -875 FT (psia)
OSAGE FEDERAL NO.1	PBU	08/30/88	1802.8	70.206	4100	0.117 (1)	4151.5	1808.8	3325	-826.5	44.8300	0.3113	1837.1
APACHE FEDERAL NO.2	ST	06/30/89	1662.4	N/A	4229	0.117	4229.0	1662.4	3330	-899.0	44.8300	0.3113	1668.1
APACHE FEDERAL NO.2	PBU/ST	01/18/91	1445.2 (3)	120.5	3958	0.117 (2)	4229.0	1476.9	3330	-899.0	44.8300	0.3113	1482.6
OSAGE FEDERAL NO.1	PBU/ST	02/13/91	1162.0 (3)	121	4080	0.320	4151.5	1184.9	3325	-826.5	44.8300	0.3113	1213.2
APACHE FEDERAL NO.2	PBU/ST	09/06/91	1249.8 (3)	167	4182	0.310	4229.0	1264.4	3330	-899.0	44.8300	0.3113	1270.1
OSAGE FEDERAL NO.2	PBU/ST	09/10/91	1161.8 (3)	70	4080	0.310	4172.0	1190.3	3317	-855.0	44.8300	0.3113	1209.7

- (1) ASSUMED FROM APACHE NO 2A 06/30/89 DATA
(1) ASSUMED FROM APACHE NO 2A 06/30/89 DATA
(3) CALCULATED AVERAGE RESERVOIR PRESSURE
FROM PRESSURE BUILD-UP ANALYSIS

FIGURE 7

SUMMARY OF RESERVOIR PRESSURE HISTORY
 PARKWAY (DELAWARE) FIELD
 'A' SAND
 EDDY COUNTY, NEW MEXICO

WELL NAME	TYPE SURVEY	TEST DATE	GAUGE PRESSURE (psig)	SHUT-IN TIME (hrs)	GAUGE DEPTH (ft)	PRESSURE GRADIENT (psi/ft)	MID. PERFORATION (ft)	PRESSURE MID PERF (psig)	ELEVATION KB (ft)	SUB-SEA MID-PERF (ft)	OIL DENSITY (lb/ft ³)	OIL GRADIENT (psi/ft)	PRESSURE @ MID-SAND OF -653 FT (psig)
APACHE FEDERAL NO.1	ST	06/30/89	1662.5	N/A	3960	0.276	3961.5	1662.9	3331	-630.5	44.8300	0.3113	1683.1
APACHE FEDERAL NO.1	ST	01/18/91	1279.8	N/A	3800	0.207 (1)	3961.5	1313.2	3331	-630.5	44.8300	0.3113	1333.4
APACHE FEDERAL NO.2	PBU/ST	12/03/91	1227.8	119	3987	0.025	3987.5	1227.8	3344	-643.5	44.8300	0.3113	1244.0

(1) ESTIMATED BASED ON COMPARISON WITH 06/30/89 GRADIENT

FIGURE 8

VOLUMETRIC INITIAL OIL IN PLACE
 PARKWAY (DELAWARE) FIELD
 EDDY COUNTY, NEW MEXICO
 "A" SAND

OPERATOR	AVERAGE POROSITY	AVERAGE WATER SATURATION	BULK VOLUME ACRE-FEET	INITIAL RESEVOIR PRESSURE PSIA	INITIAL OIL FVF RB/STB	CALCULATED INITIAL OIL IN PLACE STB	PERCENT OF TOTAL
MEIDIAN	0.182	0.388	6,705	1743	1.2153	4,767,327	41.7
SIETE	0.170	0.458	5,900	1743	1.2153	3,470,178	30.4
SANTA FE	0.174	0.416	3,162	1743	1.2153	2,051,311	17.9
OTHERS	0.180	0.502	1,991	1743	1.2153	1,139,189	10.0
TOTAL			17,758			11,428,005	100.00

FIGURE 9

VOLUMETRIC INITIAL OIL IN PLACE
 PARKWAY (DELAWARE) FIELD
 EDDY COUNTY, NEW MEXICO
 "B" SAND

OPERATOR	AVERAGE POROSITY	AVERAGE WATER SATURATION	BULK VOLUME ACRE-FEET	INITIAL RESEVOIR PRESSURE PSIA	INITIAL OIL FVF RB/STB	CALCULATED INITIAL OIL IN PLACE STB	PERCENT OF TOTAL
MEIDIAN	0.169	0.439	7,415	1772	1.2171	4,481,156	16.1
SIETE	0.167	0.419	22,338	1772	1.2171	13,814,993	49.5
SANTA FE	0.168	0.429	14,450	1772	1.2171	8,835,431	31.6
OTHERS	0.164	0.471	1,425	1772	1.2171	788,021	2.8
TOTAL			45,627			27,919,601	100.0

FIGURE 10

VOLUMETRIC INITIAL FREE GAS IN PLACE
 PARKWAY (DELAWARE) FIELD
 EDDY COUNTY, NEW MEXICO
 'C' SAND

OPERATOR	AVERAGE POROSITY	AVERAGE WATER SATURATION	BULK VOLUME ACRE-FEET	INITIAL RESEVOIR PRESSURE PSIA	INITIAL GAS FVF (RF/SCF)	CALCULATED INITIAL FREE GAS IN PLACE MMCF	PERCENT OF TOTAL
MEIDIAN	0.188	0.285	486	1841	0.007079	403	27.3
SIETE	0.176	0.315	1,444	1844	0.007067	1,073	72.7
SANTA FE	---	---	---	---	---	---	---
OTHERS	---	---	---	---	---	---	---
TOTAL			1,930			1,476	100.0

FIGURE 11

VOLUMETRIC INITIAL OIL IN PLACE
 PARKWAY (DELAWARE) FIELD
 EDDY COUNTY, NEW MEXICO
 C SAND

OPERATOR	AVERAGE POROSITY	AVERAGE WATER SATURATION	BULK VOLUME ACRE-Feet	INITIAL RESEVOIR PRESSURE PSIA	INITIAL OIL FVF RB/STB	CALCULATED INITIAL OIL IN PLACE STB	PERCENT OF TOTAL
MEIDIAN	0.178	0.375	10,683	1864	1.2230	7,539,702	27.054
SIEITE	0.182	0.453	19,000	1871	1.2234	11,970,311	42.952
SANTA FE	0.182	0.464	13,385	1878	1.2239	8,285,664	29.730
OTHERS	0.165	0.435	124	1831	1.2209	73,575	0.264
TOTAL			43,192			27,869,252	100.000

FIGURE 12

RESERVOIR SIMULATION GRID

PARKWAY (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

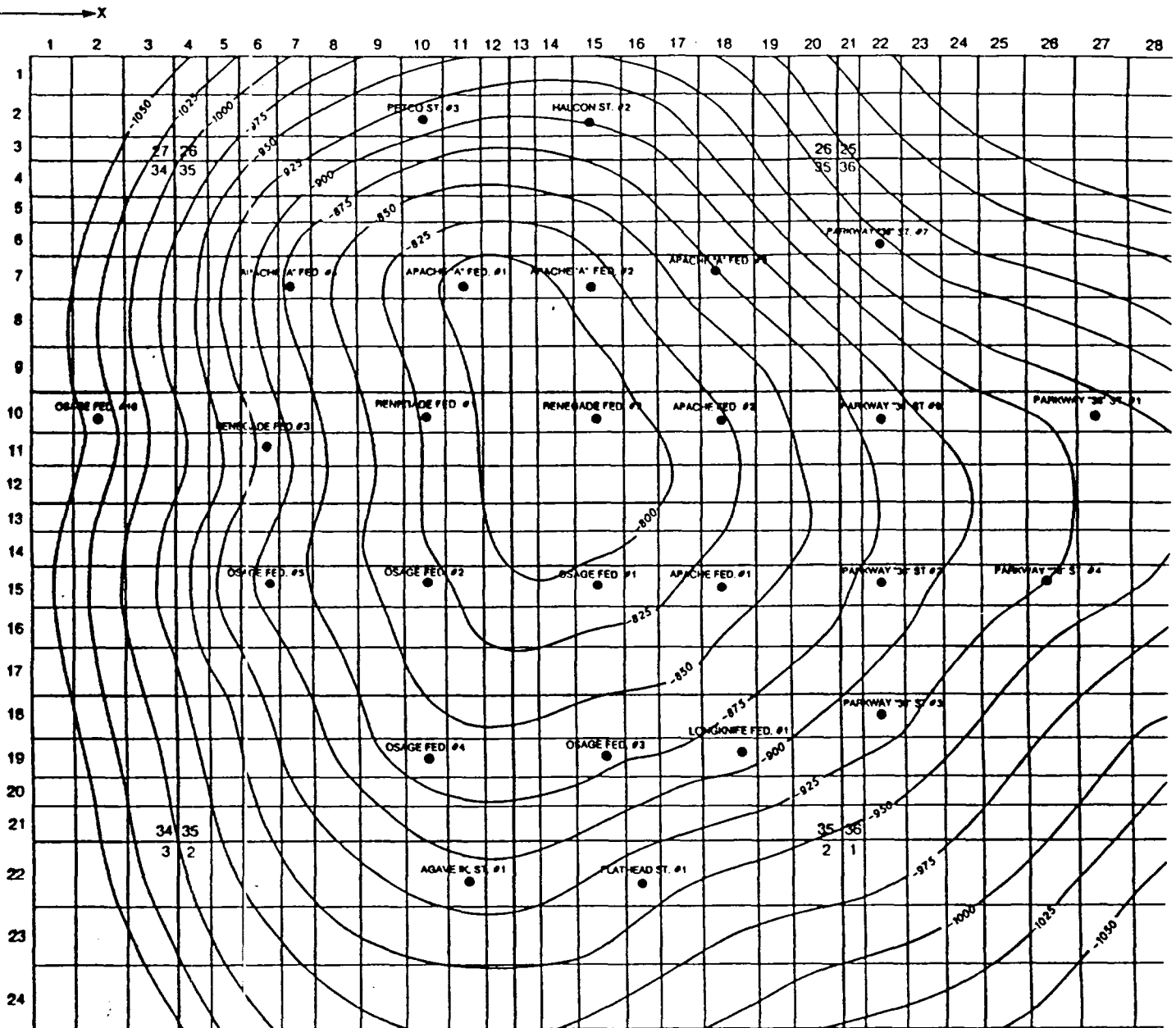


FIGURE 13

RESERVOIR SIMULATION INPUT DATA
INITIAL RESERVOIR DESCRIPTION DATA
PARKWAY (DELAWARE) FIELD
C SAND
EDDY COUNTY, NEW MEXICO

Grid Dimensions	28 x 24 x 3
Original Reservoir Pressure at -850 feet	1830 psia
Reservoir Temperature	110° F
Original Oil-Water Contact	-1135 feet
Original Gas-Oil-Contact: C ₁ Sand	-806 feet
C ₂ Sand	-825 feet
C ₃ Sand	-850 feet
Average Porosity	17.5%
Thickness	Isopach maps
Permeability: Horizontal	Iso-permeability maps
Ratio of Vertical to Horizontal Permeability	0.01 to .05
Top of Sand	Structure maps
Connate Water Saturation	28%
Residual Oil Saturation to Water	26%
Residual Oil Saturation to Gas	32%
Hydrocarbon Properties:	
Bubble Point Pressure	1838 psia
Initial Gas-Oil-Ratio	483 MSCF/STB
API Stock Tank Gravity	41.3
Initial Oil FVF	1.2213 RB/STB
Gas Gravity (Air = 1.0)	.750
Gas Viscosity	.017 Cp
Oil Viscosity	1.04 Cp

FIGURE 14

**RESERVOIR PRESSURE COMPARISON
PARKWAY (DELAWARE) FIELD STUDY
EDDY COUNTY, NEW MEXICO**

DATE	WELL	Actual Pressure		Simulated Pressure	
		SIBHP (PSIA)	P_{wf} (PSIA)	SIBHP (PSIA)	P_{wf} (PSIA)
02/13/91	Osage Federal No. 1	1107	732	1165	785
09/13/91	Apache Federal No. 2A	1226	1082	1218	1049
09/10/91	Osage Federal No. 2	1016	427	1021	410

FIGURE 15

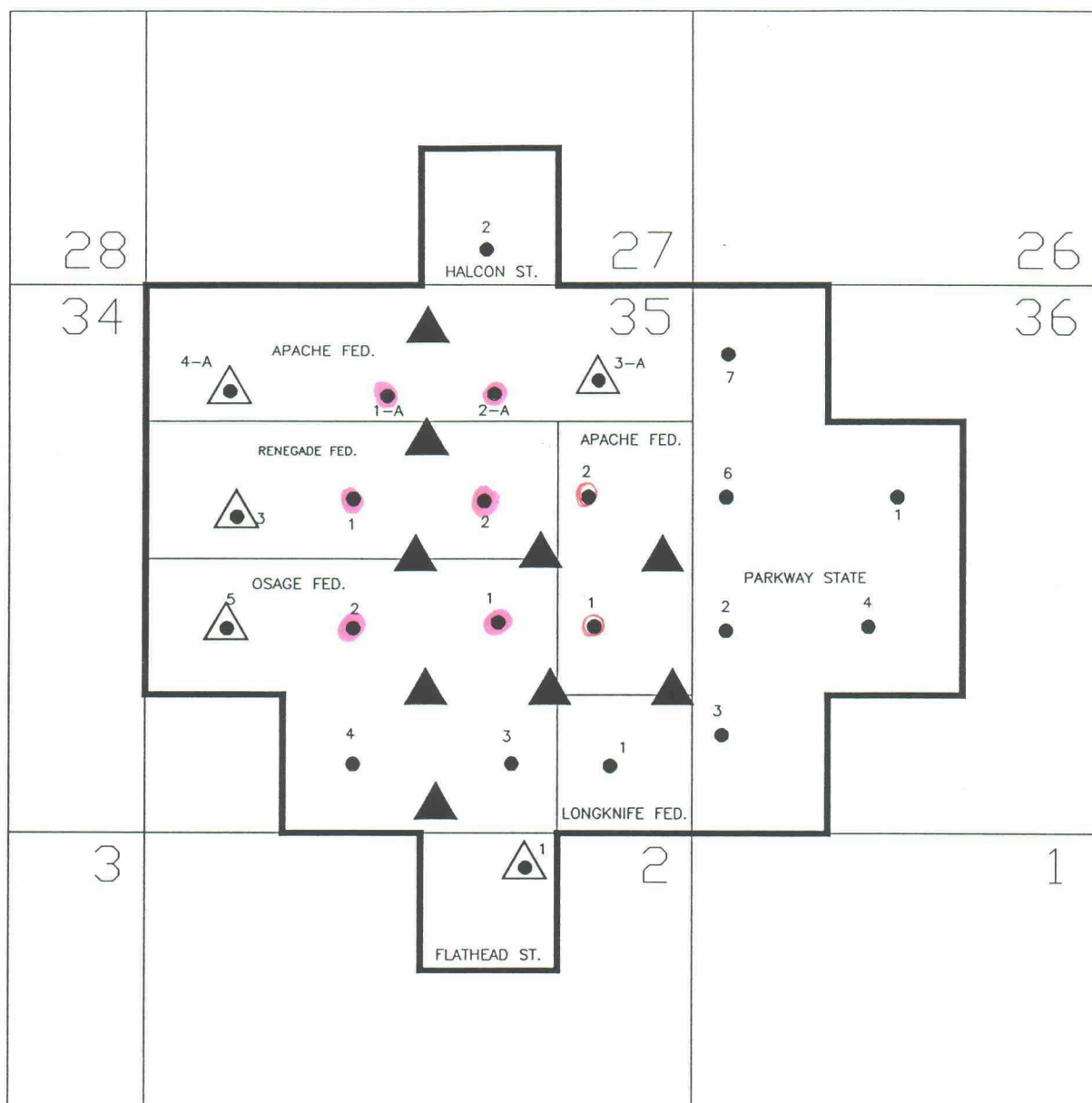
PROJECTED WATER INJECTION

YEAR	ANNUAL WATER INJECTION (STB)	DAILY WATER INJECTION (STB)
1993	543,123	1,488
1994	1,774,019	4,860
1995	1,776,358	4,867
1996	2,183,886	5,983
1997	2,073,860	5,682
1998	1,997,645	5,473
1999	1,957,360	5,363
2000	1,921,977	5,266
2001	1,904,424	5,218
2002	1,893,735	5,188
2003	1,897,252	5,198
2004	1,904,497	5,218
2005	1,920,520	5,262
2006	1,931,396	5,291
2007	1,947,994	5,337
2008	1,961,652	5,374
2009	1,980,521	5,426
2010	1,991,782	5,457
2011	2,008,453	5,503
2012	2,021,952	5,540
2013	2,040,786	5,591
2014	2,051,256	5,620
2015	2,066,929	5,663
2016	2,078,964	5,696





PKUNWTIN

FIGURE 16

Township 19 South, Range 29 East



Township 20 South, Range 29 East
PARKWAY FIELD
 EDDY COUNTY, NEW MEXICO

-  Proposed injector conversion
-  Proposed new injector
-  Delaware producer
-  PROPOSED WATERFLOOD BOUNDARY

parkwf.dwg

FIGURE 17

CONVERSIONS

5 CONVERSIONS	30000 \$/EA.	\$150,000
PACKER	2000 \$/EA.	
PLASTIC COAT TUBING	9500 \$/EA.	
PULLING UNIT (5 DAYS)	6000 \$/EA.	
INJECTION HEAD	6000 \$/EA.	
HAULING	2500 \$/EA.	
TEST PACKER	1500 \$/EA.	
MISCELLANEOUS	2500 \$/EA.	

FIGURE 18

PARKWAY WATERFLOOD COSTS

FACILITIES

1 500 BBL. SETTLING TANK	6000 \$/EA.	\$6,000
2 1000 BBL. STORAGE TANKS	11150 \$/EA.	\$22,300
1 750 BBL. GUNBARREL	10850 \$/EA.	\$10,850
2 REDA PUMPS	23000 \$/EA.	\$46,000
2 CARTRIDGE FILTERS	6300 \$/EA.	\$12,600
2 INJECTION MANIFOLDS	5000 \$/EA.	\$10,000
INJECTION LINES		
1250' 2 7/8" FIBERGLASS	4.65 \$/FT.	\$5,815
1680' 2 3/8" FIBERGLASS	3.20 \$/FT.	\$5,380
14150' 1 1/2" FIBERGLASS	2.10 \$/FT.	\$17,690
BURY 17080' OF LINES	1.25 \$/FT.	\$21,350
ELECTRICAL HOOKUP		\$12,000
PAD EXTENSION		\$10,000
LABOR		\$20,000
PUMP HOUSE		\$5,000
CONTINGENCY		\$25,000
TOTAL FACILITIES		\$229,985
DRILLING		
9 NEW INJECTION WELLS	309000 \$/EA.	\$2,781,000
CONVERSIONS		
5 CONVEFSIONS	30000 \$/EA.	\$150,000
RECOMPLETIONS		
3 RECOMPLETIONS	35000 \$/EA.	\$105,000
MISCELLANEOUS		
WATERFLOOD STUDY & LEGAL		\$120,000
GRAND TOTAL		\$3,385,985

FIGURE 19

CURRENT PROPOSED PATTERN

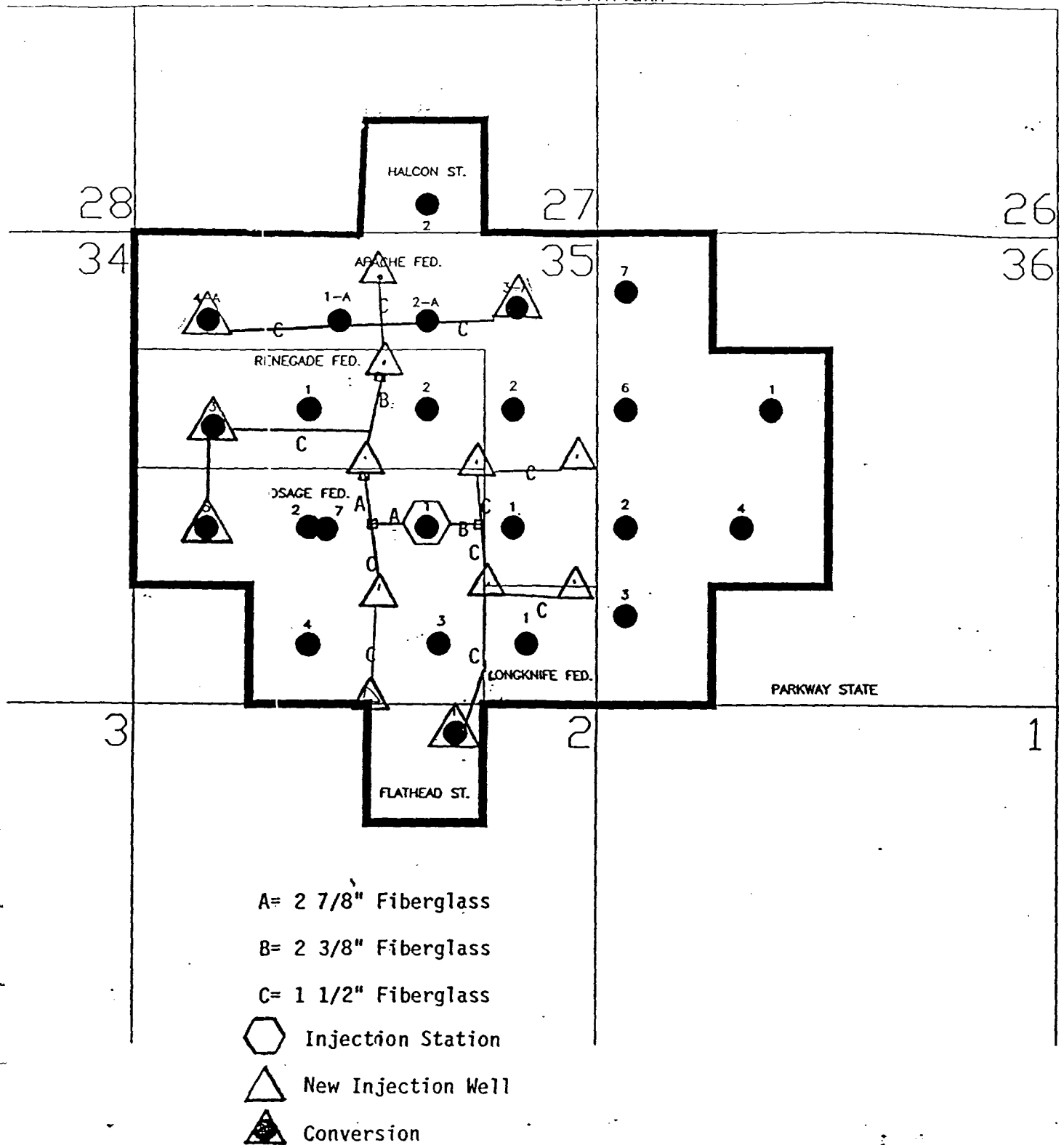


FIGURE 20

A SAND (25.66% OF UNIT)

	RECOVERABLE OIL MBO	REMAINING OIL MBO	USABLE WELLBORES	RECOVERABLE GAS MMCF	REMAINING GAS MMCF
TRACT 1	0.000	0.000	1.000	0.000	0.000
TRACT 2	435.735	362.926	4.000	1,742.940	1,607.072
TRACT 3	201.399	201.399	2.000	805.596	805.596
TRACT 4	9.609	6.487	1.000	38.436	32.742
TRACT 5	204.000	204.000	5.000	816.000	816.000
TRACT 6	0.000	0.000	1.000	0.000	0.000
TRACT 7	158.559	154.804	2.000	634.236	630.408
TRACT 8	0.000	0.000	1.000	0.000	0.000
TRACT 9	41.167	33.982	2.000	164.668	154.171
TRACT 10	1.116	0.000	3.000	1.902	0.000
TRACT 11	0.000	0.000	0.000	0.000	0.000
TOTAL	1,051.585	963.598	22.000	4,203.778	4,045.989

B SAND (3.37% OF UNIT)

	RECOVERABLE OIL MBO	REMAINING OIL MBO	USABLE WELLBORES	RECOVERABLE GAS MMCF	REMAINING GAS MMCF
TRACT 1	0.000	0.000	1.000	0.000	0.000
TRACT 2	0.000	0.000	4.000	0.000	0.000
TRACT 3	63.501	1.250	2.000	254.004	127.888
TRACT 4	10.012	6.796	1.000	40.048	34.178
TRACT 5	56.177	0.088	5.000	223.717	80.041
TRACT 6	7.884	1.491	1.000	31.536	31.536
TRACT 7	0.000	0.000	2.000	0.000	0.000
TRACT 8	0.000	0.000	1.000	0.000	0.000
TRACT 9	0.364	0.000	2.000	1.456	0.000
TRACT 10	0.000	0.000	3.000	0.000	0.000
TRACT 11	0.000	0.000	0.000	0.000	0.000
TOTAL	137.938	9.625	22.000	550.761	273.643

C SAND (70.97% OF UNIT)

	RECOVERABLE OIL MBO	REMAINING OIL MBO	USABLE WELLBORES	RECOVERABLE GAS MMCF	REMAINING GAS MMCF
TRACT 1	11.162	0.452	1.000	9.025	0.365
TRACT 2	646.773	472.610	4.000	2,206.239	1,894.880
TRACT 3	270.900	182.730	2.000	981.823	837.111
TRACT 4	206.944	124.025	1.000	761.186	631.550
TRACT 5	1,007.493	656.093	5.000	3,227.619	2,598.018
TRACT 6	69.000	69.000	1.000	646.000	646.000
TRACT 7	335.392	237.804	2.000	1,191.628	1,050.998
TRACT 8	71.663	48.211	1.000	362.842	317.471
TRACT 9	48.204	37.151	2.000	313.619	307.600
TRACT 10	200.123	135.273	3.000	1,459.328	1,335.350
TRACT 11	41.000	41.000	0.000	608.814	608.814
TOTAL	2,908.653	2,004.349	22.000	11,768.123	10,228.157

PKUNPAR

FIGURE 21

EXHIBIT "C"
UNIT WORKING INTEREST

30-Nov-92	TRACT 1	TRACT 2	TRACT 3	TRACT 4	TRACT 5	TRACT 6	TRACT 7	TRACT 8	TRACT 9	TRACT 10	TRACT 11	UNIT TOTAL	APPROVED
ASCO OIL & GAS	0.000125		0.000468	0.000220	0.001142							0.001955	0.00195
CAROLINA AMELUNXEN			0.000468	0.000220	0.001142	0.000082						0.001912	0.00191
ROBERT B AMELUNXEN			0.000468	0.000220	0.001142	0.000082						0.001912	0.00191
RYRON A BACHSCHMID			0.000635	0.000441	0.002284							0.003660	
STE T & GAIL BALOG	0.000058											0.000058	0.00005
OLAS BARNES						0.000082						0.000082	0.00008
JURE B BARR						0.000137						0.000137	0.00013
HARRY D BLAKE, JR	0.000029											0.000029	0.00002
BLAKEFIELD ENERGY COMPANY			0.001870	0.000882	0.004568	0.000326						0.007646	0.00764
ORICA OIL INC			0.000935	0.000441	0.002284	0.000163						0.003823	0.00382
JANE E BROWN	0.000029											0.000029	0.00002
NEIL & MARLYN BURCHAM			0.000468	0.000220	0.001142							0.001830	
T K CAMPBELL			0.001870	0.000882	0.004568	0.000326						0.007646	0.00764
THOMAS K CAMPBELL, II			0.001870	0.000882	0.004568							0.007320	0.00732
H CAVIN	0.000100											0.000100	0.00010
JALY H CAVIN, JR	0.000141											0.000141	0.00014
INTOCO INC					0.057105							0.057105	
ROBERT L DALE			0.000935	0.000441	0.002284	0.000163						0.003823	0.00382
ANDREW P DANA	0.000029											0.000029	0.00002
JBREY L OR BETTY JO DUNN, SR			0.002805	0.001322	0.006853	0.000489						0.011489	
JOBERT WEATON	0.000029											0.000029	0.00002
ILDRED RUTH FERGUSON	0.000029											0.000029	0.00002
JOHN GAVLICK	0.000014											0.000014	0.00001
CHARLES GREER				0.000220	0.000457							0.000677	0.00067
NATHAN C GREER			0.001496	0.000441	0.002969	0.000245						0.005151	0.00515
ARVIN C GROSS	0.000145											0.000145	0.00014
HANAGAN OIL PROPERTIES INC						0.000082						0.000082	0.00008
HANAGAN PETROLEUM CORP.	0.000181											0.000181	0.00018
HANSON OPERATING CO. INC			0.014027	0.005510	0.028553							0.048089	
STUART D HANSON			0.000935	0.000441	0.002284							0.003660	
E. & EMMA HARRINGTON TRUST			0.000935	0.000441	0.002284	0.000163						0.003823	0.00382
WILLIAM & LORETTA HUNKER TRUST			0.000935	0.000441	0.002284	0.000163						0.003823	0.00382
JIM IKARD			0.000468	0.000220	0.001142							0.001830	0.00183
TEDDY JAMES			0.000935	0.000441	0.002284	0.000163						0.003823	
PATRICIA K JENNINGS			0.000468	0.000220	0.001142							0.001830	
AROLD D JUSTICE			0.000935	0.000441	0.002284							0.003660	0.00366
JOHN KINSOLVING			0.001870	0.000882	0.004568	0.000326						0.007646	0.00764
ANDREW WEST	0.000087											0.000087	0.00008
LARUE & MUNCEY			0.004678	0.002204	0.011421	0.000815						0.019118	0.01911
ROBERT J LEONARD	0.000076											0.000076	0.00007
OKAY OIL CORPORATION	0.000059											0.000059	0.00005
ANZANO OIL CORPORATION			0.000935	0.000441	0.002284	0.000163						0.003823	
ARINE & GAS INTERNATIONAL INC			0.002805	0.001102	0.005711	0.000408						0.010025	0.01002
MERIDIAN OIL		0.254424					0.119002					0.373426	0.37342
MONARCH OIL & GAS INC	0.000082											0.000082	0.00008
TRICK J MORELLO			0.000935	0.000441	0.002284	0.000163						0.003823	
WANKS & ROBIN L MORGAN	0.000058											0.000058	0.00005
SUNTAIN APPLE COMPANY			0.002338	0.001102	0.005711	0.000408						0.009558	
MICHAEL J NORTON, III			0.002805	0.001322	0.006853	0.000489						0.011489	0.01148
PERMIAN BASIN INVESTMENT	0.000033											0.000033	0.00003
PERMIAN HUNTER CORPORATION	0.000184		0.000468	0.000220	0.001142	0.000082						0.002096	0.00209
TROLUX INC			0.002805	0.001102	0.005711	0.000408						0.010025	0.01002
PERCE IRREVOCABLE TRUST #2	0.000058											0.000058	0.00005
POLO OIL & GAS COMPANY	0.000087											0.000087	0.00008
RADMACHER FAMILY TRUST	0.000029											0.000029	0.00002
ED OAK CATTLE COMPANY	0.000043											0.000043	0.00004
WON RICHARDS	0.000029											0.000029	0.00002
JOSE E RODRIGUEZ			0.000701	0.000331	0.001713							0.002745	
SANTA FE ENERGY RESOURCES INC			0.031170	0.017142	0.047597	0.003397		0.019633	0.027093	0.061301	0.012734	0.220068	
JAMES L SCHULTZ	0.000029											0.000029	0.00002
SCOTT EXPLORATION INC	0.000197											0.000197	0.00019
ARREN C SCOTT	0.000029											0.000029	0.00002
JANE SHUMATE			0.000935	0.000441	0.002284							0.003660	0.00366
JOHNETTE OIL & GAS CORPORATION			0.033898	0.015072	0.043200	0.012451					0.004245	0.108865	0.10886
MARY G SOLDOW			0.000374	0.000220	0.001142	0.000082						0.001818	
SOUTHLAND ROYALTY COMPANY						0.007279						0.007279	0.00727
ANTH STOCKER	0.000029											0.000029	0.00002
DATA PRODUCTION COMPANY	0.000058											0.000058	0.00005
HANCIS G TRACY, III			0.000935	0.000441	0.002284							0.003660	
UMC PETROLEUM CORPORATION	0.000581											0.000581	0.00058
RILEY G UNDERWOOD, JR			0.001870	0.000882	0.004568							0.007320	
CKV WALKER	0.000058											0.000058	0.00005
SHREN INC	0.000145											0.000145	0.00014
INN INVESTMENTS INC	0.000058											0.000058	0.00005
LORI SCOTT WORRELL	0.000029											0.000029	0.00002
CHARLES WORRELL			0.000935	0.000441	0.002284							0.003660	0.00366
	0.003475	0.254424	0.124681	0.058770	0.285527	0.029115	0.119002	0.019633	0.027093	0.061301	0.016979	1.000000	0.61571

UNIT ROYALTY INTEREST

TRACT 1 0.003475	TRACT 2 0.254424	TRACT 3 0.124681	TRACT 4 0.05877	TRACT 5 0.285527	TRACT 6 0.028115	TRACT 7 0.119002	TRACT 8 0.019633	TRACT 9 0.027083	TRACT 10 0.081301	TRACT 11 0.016979	COMPANY TOTAL	APPROVED
MOBIL PRODUCING				0.0142763500							0.0142763500	0.0142763500
MARY ARD				0.0004162984							0.0004162984	
FRANCIS BOWDEN				0.0006245903							0.0006245903	
CORONET TRADING				0.0028552700							0.0028552700	
ALLAN HANNIFIN				0.0005710540							0.0005710540	
RODERICK DAVIS				0.0005710540							0.0005710540	
EDWARD HUDSON, JR.				0.0007734926							0.0007734926	
JOSEPHINE HUDSON				0.0004162984							0.0004162984	
ALAN JOCHIMSEN				0.0005710540							0.0005710540	
DELMAR LEWIS				0.0006245903							0.0006245903	
KATHLEEN BULLARD				0.0005710540							0.0005710540	
WILLIAM ELLAND				0.0011421080							0.0011421080	
SIETE OIL & GAS		0.0012987563	0.0014692500	0.0071381750			0.0006135313	0.0005644285	0.0012770837		0.0123812268	0.0123812270
SANTA FE ENERGY		0.0090913206	0.0051423750			0.0059501000	0.0006135313	0.0005644285	0.0012770837		0.0168807383	
SYNGUNE PARTNERSHIP											0.0058501000	
HANAGAN PETROLEUM	0.0000032779										0.0000032779	0.0000032779
RANDOLPH RICHARDSON	0.0000178995										0.0000178995	0.0000178995
MCKAY OIL CORP	0.0000104893										0.0000104893	0.0000104893
MARVIN GROSS	0.0000026223										0.0000026223	0.0000026223
S. H. CAVIN	0.0000018094										0.0000018094	0.0000018094
HARRY D. BLAKE, JR.	0.0000005245										0.0000005245	0.0000005245
DAMON RICHARDS	0.0000005244										0.0000005244	0.0000005244
WARREN SCOTT	0.0000005245										0.0000005245	0.0000005245
FRANK & ROBIN MORGAN	0.0000010489										0.0000010489	0.0000010489
RONADERO COMPANY	0.0000013767										0.0000013767	0.0000013767
PETE & GAIL BALOG	0.0000010489										0.0000010489	0.0000010489
JACK & EDNA MAE WALKER	0.0000010489										0.0000010489	0.0000010489
STEPHEN T. MITCHELL	0.0000173750										0.0000173750	0.0000173750
ROBERT EATON	0.0000005245										0.0000005245	0.0000005245
RED OAK CATTLE CO.	0.0000007867										0.0000007867	0.0000007867
PERMAN BASIN INVESTMENT	0.0000173750										0.0000173750	0.0000173750
WARREN, INC.	0.0000026223										0.0000026223	0.0000026223
MONARCH OIL & GAS	0.0000005245										0.0000005245	0.0000005245
LAND WEST	0.0000015734										0.0000015734	0.0000015734
WINN INVESTMENTS INC	0.0000010489										0.0000010489	0.0000010489
STRATA PRODUCTION	0.0000010489										0.0000010489	0.0000010489
STAN STOCKER	0.0000005244										0.0000005244	0.0000005244
DUANE BROWN	0.0000005245										0.0000005245	0.0000005245
DON GAVLICK	0.0000026222										0.0000026222	0.0000026222
JAMES & PAM SCHULTZ	0.0000005245										0.0000005245	0.0000005245
BURGE PIERCE	0.0000010489										0.0000010489	0.0000010489
ANDREW DANA	0.0000005244										0.0000005244	0.0000005244
PERMAN HUNTER CORP	0.0000068181										0.0000068181	0.0000068181

UNIT ROYALTY INTEREST

	TRACT 1 0.003475	TRACT 2 0.254424	TRACT 3 0.124681	TRACT 4 0.05877	TRACT 5 0.285527	TRACT 6 0.028115	TRACT 7 0.119002	TRACT 8 0.010633	TRACT 9 0.027903	TRACT 10 0.051301	TRACT 11 0.010372	COMPANY TOTAL	APPROVED
PORT ARTHUR STATE	0.000005244											0.000005244	0.000005244
SEALY CAVIN, JR.	0.0000025568											0.0000025568	0.0000025568
SCOTT EXPLORATION	0.0000035664											0.0000035664	0.0000035664
RADMACHER FAMILY TRUST	0.0000005245											0.0000005245	0.0000005245
MILDRED RUTH FERGUSON	0.0000005245											0.0000005245	0.0000005245
POLO OIL & GAS	0.0000015734											0.0000015734	0.0000015734
CAL - MON OIL COMPANY						0.0009203639						0.0009203639	
A. T. CARLTON						0.0009144128						0.0009144128	
ROBERT L. MONAGAN						0.0000546289						0.0000546289	
GARON CAGLE						0.0000113732						0.0000113732	
TOM C. WANNY						0.00000113732						0.00000113732	
DOROTHY D. DUNLAP						0.0000113729						0.0000113729	
FORREST DUNLAP, III						0.0000113729						0.0000113729	
J. H. HERD						0.0000913786						0.0000913786	
MARSHAL & WINSTON, INC.						0.0001218384						0.0001218384	0.0001218384
ESTORIL PRODUCING						0.0001142234						0.0001142234	
JOHN H. HENDRIX						0.0001142234						0.0001142234	
PATRICK W. ARTHUR PRODUCTION						0.0000304566						0.0000304566	
HILL REVOCABLE TRUST						0.0000355363						0.0000355363	
DOROTHY JEAN KEENOM						0.0000126915						0.0000126915	0.0000126915
TRUSTEE - NANCY JONES												0.0000000000	
DOROTHY JEAN KEENOM						0.0000126915						0.0000126915	0.0000126915
TRUSTEE - T. H. P. JONES TRUST												0.0000000000	
JOE S. HILL						0.0000304566						0.0000304566	
HORSESHOE OIL & GAS						0.0000152283						0.0000152283	
BLACKSTONE ENERGY						0.0000152283						0.0000152283	
GERALDINE L. ZOLLER						0.0000609223						0.0000609223	
JACK MARKHAM						0.0000304566						0.0000304566	
J. M. WELBORN						0.0000152283						0.0000152283	
ANNA MAE WELBORN TRUST						0.0000152283						0.0000152283	
ERNEST ANGELO, JR.						0.0000456893						0.0000456893	
RUSSELL J. RAMSLAND, SR.						0.0000019580						0.0000019580	0.0000019580
J. BARNES RAMSLAND						0.0000140984						0.0000140984	0.0000140984
C. R. BURCH						0.0000043079						0.0000043079	0.0000043079
R. J. RAMSLAND, JR.						0.0000043079						0.0000043079	0.0000043079
J. CLEM BARNES ESTATE						0.0000140984						0.0000140984	0.0000140984
V. ELAINE MURPHY						0.0000043079						0.0000043079	
CHRISTINE MALLAMS						0.0000043079						0.0000043079	
STEVE C. BARNES						0.0000043079						0.0000043079	
SLEEPY WYNN						0.0000019580						0.0000019580	
SHIRLEY ANN WYNN						0.0000140984						0.0000140984	
C. F. WYNN						0.0000043079						0.0000043079	
EIZABETH ANN RAMSLAND						0.0000043079						0.0000043079	0.0000043079
JULIE ELLEN BARNES						0.0000043515						0.0000043515	0.0000043515
ADRIENNE WYNN 1885 TRUST						0.0000043515						0.0000043515	0.0000043515
UNITED STATE OF AMERICA						0.0000043515						0.0000043515	0.0000043515
STATE OF NEW MEXICO	0.0004343750					0.0045155009						0.0045155009	0.0045155009
TOTAL/TOTAL APPROVED	0.0005389466	0.0318030000	0.0259752042	0.0139578750	0.0713817500	0.0064208733	0.0208253500	0.0036811875	0.0056443578	0.0127710028	0.0028298339	0.1958293812	0.1610644158

PARKWAY DELAWARE DATA SHEET

1. Average Porosity = 17
2. Average Permeability = 3.2
3. Average Oil & Water Saturation = 47,43
4. Average Pay Thickness = 133
5. Oil Gravity = 40 Gas Gravity = .79
6. Salinity of Water = 142,000 ppm
7. Bubble point pressure = 1350
8. Formation Volume Factor Initial = 1.22 Current = 1.19
9. Viscosity = 1.13 cp
10. Original Reservoir Pressure = 1780
11. Current Reservoir Pressure = 1330
12. Reservoir Temperature = 109
13. Cumulative Oil Production = 1,281,829 as of 5/92
14. Cumulative Gas Production = 2,356,079 as of 5/92
15. Cumulative Water Production = 817,691 as of 5/92
16. Ultimate Primary Oil = 4,110,000 BBLS
17. Ultimate Primary Gas = 16,523,000 MCF
18. Current Oil Production = 1169 B/D
19. Current Gas Production = 2810 M/D
20. Current Water Production = 732 B/D
21. # of Wells Pumping = 17, Flowing = 5, Shut-In = 1
22. Drive Mechanism – Solution Gas
23. OOIP = 70,598 MBO

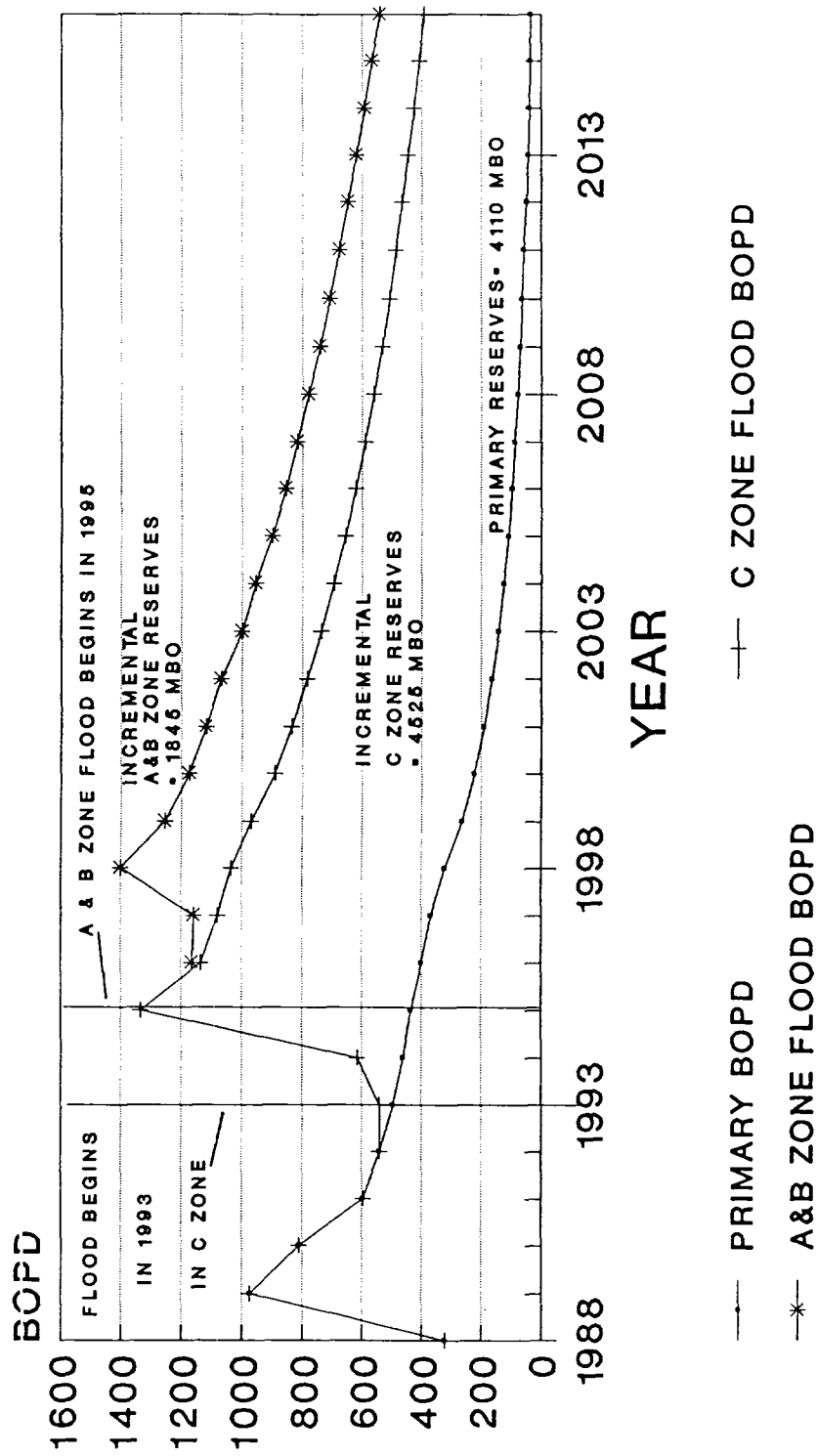
pkdata.wk3

ECONOMIC SUMMARY

	PRIMARY DEPLETION	C ZONE INCREMENTAL	A & B ZONE INCREMENTAL	TOTAL INCREMENTAL
TOTAL INVESTMENT (M\$)	0	3364	455	3819
OPERATING EXPENSES (M\$)	7090	7034	0	7034
LEASE GROSS RESERVES				
OIL (MMSTB)	2815	4525	1845	6370
GAS (MMCF)	14018	4525	1845	6370
PROFITABILITY INDICATORS				
DISC. NET CASH FLOW				
@ 10% (M\$)	27493	18928	7872	26800
@ 15% (M\$)	22756	12008	4904	16912
BTAX ROR (%)	100	47	193	51
PAYOUT (YEARS)	0	3.6	4.7	3.7
PROJECT LIFE (YEARS)	24	30	33	33

FIGURE 25

PARKWAY DELAWARE FIELD EXPECTED WATERFLOOD RESULTS



BASED ON PLATT SPARKS ANALYSIS