STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [XX] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [ ] yes [XX] no

II. Operator: Phillips Oil Company

Address: 4001 Penbrook Odessa, Texas 79762

Contact party: T. H. McLemore Phone: (915) 367-1257

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 [XX] 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: W. J. Mueller Title Sr. Engineering Specialist

Signature: [signature] Date: 9/15/84

* 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. Logging data submitted when wells were drilled.

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.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

April 26, 1985

Mr. Thomas Kellahin
Kellahin & Kellahin
Attorneys at Law
Post Office Box 2265
Santa Fe, New Mexico

Re: CASE NO. ~~8416~~
ORDER NO. ~~R-7900~~

Applicant:

Phillips Oil Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Sincerely,

R. L. STAMETS
Director

RLS/fd

Copy of order also sent to:

Hobbs OCD ~~x~~
Artesia OCD ~~x~~
Aztec OCD

Other

VII. Proposed Operations

1. Injection Volume - Average 6900 BWPD
   Maximum 7500 BWPD

2. System: Closed

3. Injection Pressure - Average: 550 psi
   Maximum: 550 psi

4. Water Source: Produced water w/ fresh water make-up.
   (Analysis and compatibility tests attached.)

5. N/A

VIII. Geological Data

1. Injection Zone

   a. Lithology: Fine grained sandstone w/ dolomitic cement changing to dolomite w/ anhydritic veins.

   b. Name: Grayburg/San Andres

   c. Thickness: 1850'

   d. Depth: 2150'-4000'

2. Aquifer

   a. Name: Ogalala

   b. Depth: ±300'

IX. Proposed Treatment

1. Acidize the Grayburg w/ ±5000 gallons of 7.5% NEFE HCl and the San Andres w/ ±7500 gallons of 15% NEFE HCl.

XI. Fresh Water

1. No fresh water wells produce within one (1) mile of the proposed injection wells.

COMPATABILITY TESTS

MALJAMAR FRESH & GRAYBURG JACKSON PRODUCED WATERS

ANALYSIS BY UNICHEM INTERNATIONAL, HOBBS, N.M.

Fresh Water (%)	100	86	75	50	25	14	0
Produced Water (%)	0	14	25	50	75	86	100
Specific Gravity	1.000	1.014	1.025	1.053	1.080	1.091	1.106
Total Dissolved Solids	212	22,312	39,633	79,050	119,563	134,929	157,864
pH	8.85	8.53	8.29	7.73	7.17	6.92	6.61
Cations							
Calcium (ppm)	20.0	372	649	1,279	1,908	2,185	2,538
Magnesium (ppm)	31.7	494	857	1,683	2,508	2,872	3,322
Sodium (ppm)	5.3	7,517	13,396	26,764	41,327	45,252	53,591
Anions							
Bicarbonate (ppm)	12.2	85.6	143	274	405	463	536
Carbonate (ppm)	12.0	10.3	9.0	6.0	3.0	1.6	0.0
Hydroxide (ppm)	0	0	0	0	0	0	0
Sulfates (ppm)	11	831	1,477	2,943	4,409	5,054	5,875
Chlorides (ppm)	120	13,000	23,100	46,100	69,000	79,100	92,000
Iron (ppm)	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Barium (ppm)	0.6	0.51	0.45	0.30	0.15	0.08	Not run
Ionic Strength (Molal)	6E-03	0.428	0.764	1.541	2.364	2.675	3.155
Carbonate Index @ 86 F	2.880	0.696	0.709	0.600	0.489	0.450	0.403
Calcium Carbonate Scaling?	Likely	Likely	Likely	Likely	Likely	Likely	Likely
Calcium Sulfate Index	-19.0	-44.0	-41.0	-35.0	-14.0	-0.83	13.7
Calcium Sulfate Scaling?	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Likely

KELLAHIN and KELLAHIN
Attorneys at Law
El Patio - 117 North Guadalupe
Post Office Box 2265
Santa Fe, New Mexico 87504-2265

Jason Kellahin
W. Thomas Kellahin
Karen Aubrey

Telephone 982-4285
Area Code 505

January 4, 1985

Mr. Michael E. Stogner
Oil Conservation Division
P. O. Box 2208
Santa Fe, New Mexico 87501

"Hand Delivered"

Re: Phillips Oil Company
NMOCD Case 8418

Dear Mike:

On December 28, 1984, we submitted to you a proposed order for entry in the above referenced case.

In reviewing that order, Mr. Upchurch has discovered that we omitted the first line of paragraph 4 at the top of page 7 of the proposed order. The omitted line to be inserted is as follows:

"(4) That the subject waterflood project is hereby"

We regret the error. Please advise us if you have any questions about the proposed order.

Very truly yours,

W. Thomas Kellahin

WTK:ca

cc: Mr. John Upchurch
Phillips Oil Company
4001 Penbrook
Odessa, Texas 79762

KELLAHIN and KELLAHIN
Attorneys at Law
El Patio - 117 North Guadalupe
Post Office Box 2265
Santa Fe, New Mexico 87504-2265

Jason Kellahin
W. Thomas Kellahin
Karen Aubrey

Telephone 982-4285
Area Code 505

December 28, 1984

Mr. Michael E. Stogner
Oil Conservation Division
P. O. Box 2208
Santa Fe, New Mexico 87501

"Hand Delivered"

Re: Phillips Oil Company
NMOCD Case 8418

Dear Mr. Stogner:

In accordance with your request, please find enclosed for your consideration a proposed order for entry in the above referenced case.

Very truly yours,

W. Thomas Kellahin

WTK:ca
Enc.

cc: George Terry
Phillips Oil Company
4001 Penbrook
Odessa, Texas 79762

John Upchurch
Phillips Oil Company
4001 Penbrook
Odessa, Texas 79762

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING: CASE NO. 8418

APPLICATION OF PHILLIPS OIL
COMPANY FOR A COOPERATIVE WATER-
FLOOD PROJECT, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on November 28, 1984, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this ____ day of December, 1984, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Phillips Oil Company, seeks approval of its Burch-Keely Waterflood Project and authority to institute this cooperative waterflood into the Grayburg-San Andres formation in the following acreage in Eddy County, New Mexico:

Township 17 South, Range 29 East, NMPM

Section 23: N/2N/2
Section 24: All
Section 25: All
Section 26: S/2; S/2SW/4NW/4; SE/4NE/4 and E/2SW/4NE/4

Township 17 South, Range 30 East, NMPM

Section 19: S/2SW/4
Section 30: NW/4

(3) That the applicant proposed to convert the following wells to injection:

NAME	LOCATION	PACKER	INJECTION INTERVAL
Burch BB Fed #6	660' FSL 660' FWL 19-17-30	2300'	2400-3558
Burch BB Fed #10	660' FNL 1980' FWL 30-17-30	2300'	2350-3254
Burch BB Fed #19	660' FNL 660' FEL 23-17-29	2400'	2463-3169
Burch C Fed #17	660' FNL 1980' FWL 23-17-29	2350'	2390-3218
Keely C Fed #16	1980' FSL 1980' FWL 26-17-29	2400'	2471-3018
Keely C Fed #18	1980' FSL 1980' FWL 25-17-29	2600'	2650-3262
Keely C Fed #20	1980' FSL 660' FEL 25-17-29	2500'	2550-3330
Keely C Fed #21	660' FSL 660' FWL 26-17-29	2300'	2378-3256

NAME	LOCATION	PACKER	INJECTION INTERVAL
Keely C Fed #23	660' FSL 660' FWL 25-17-29	2450'	2536-3227
Keely C Fed #25	660' FSL 1980' FEL 25-17-29	2550'	2611-3428
Keely A Fed #5	2310' FSL 330' FEL 24-17-29	2400'	2479-3613
Keely A Fed #7	1980' FSL 1980' FWL 24-17-29	2300'	2342-3488
Keely A Fed #9	1980' FNL 660' FWL 24-17-29	2250'	2333-3481
Keely A Fed #15	1650' FNL 2310' FEL 24-17-29	2300'	2376-3468
Keely B Fed #24	660' FSL 560' FWL 24-17-29	2300'	2342-3550
Keely B Fed #6	660' FNL 1980' FWL 25-17-29	2350'	2426-3158
Keely B Fed #7	1980' FNL 1980' FEL 26-17-29	2400'	2478-2987
Keely B Fed #10	1980' FSL 660' FEL 26-17-29	2400'	2466-3166
Keely B Fed #11	660' FSL 1980' FEL 26-17-29	2400'	2454-3126
Keely C Fed #5	660' FSL 1980' FEL 24-17-29	2300'	2400-3478

NAME	LOCATION	PACKER	INJECTION INTERVAL
Keely C Fed #8	660' FNL 660' FEL 25-17-29	2400'	2486-3565
Keely C Fed #10	1980' FNL 660' FWL 25-17-29	2400'	2480-3165
Keely C Fed #12	1980' FNL 1980' FEL 25-17-29	2600'	2628-3275

(4) That the Burch-Keely Waterflood Project producing wells in the proposed area, as described in Finding Paragraph No. (2) above, are in an advanced state of depletion and should properly be classified as "stripper" wells.

(5) That the proposed Burch-Keely Waterflood Project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(6) That the operator of the proposed Burch-Keely Waterflood Project should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(7) That the following described previously abandoned wells are located within one-half mile of a proposed injection well:

WELL NAME AND NO.	LOCATION	SECTION
Phillips Petroleum Co. Grayburg Deep Unit #6	Unit C	30 - T17S, R30E
Phillips Petroleum Co. Grayburg Deep Unit #4	Unit L	30 - T17S, R30E
Phillips Petroleum Co. Grayburg Deep Unit #5	Unit A	25 - T17S, R29E

(8) That prior to commencement of injection into any injection well within a one-half mile radius of any of the wells described in Finding No. (7) the operator should demonstrate that the wells described in Finding Paragraph No. (7) above have either been re-plugged or have been previously plugged and abandoned or have been cemented in such a manner as to ensure that they do not provide an avenue of escape for waters from the proposed injection zone and in accordance with a program that is satisfactory to the supervisor of the Division's district office at Artesia.

(9) That the injection of water into any of the aforesaid injection wells should be accomplished through 2 3/8-inch internally plastic lined tubing installed in a packer set at the approximate footage noted in Finding No. (3) above, with injection into the perforated and/or open hole interval at the approximate footage noted in Finding No. (3) above; that the casing-tubing annulus should be filled with an inert fluid and that a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(10) That the Burch-Keely Waterflood Project should be so equipped with a pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 0.2 psi per foot of depth from the surface to the top perforation.

(11) That the proposed Burch Keely Waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste, and will not impair correlative rights.

(12) That the Project Area should comprise all lands described in Finding No. (2) above.

(13) That the project area should be expanded upon completion of additional injection wells or by the completion of additional producing wells in the Grayburg-San Andres formation which may be shown to be affected by the injection program.

(14) That the portion of each lease in the project area should receive a waterflood allowable equal to the ability of the wells on that portion of the lease to produce.

(15) That the subject application should be approved and the projects should be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Phillips Oil Company, is hereby authorized to institute a waterflood project on its Burch-Keely Waterflood Project Area, by the injection of water into the Grayburg-San Andres formation, Grayburg Jackson Seven Rivers-Queen-Grayburg-San Andres Pool, Eddy County, New Mexico:

Township 17 South, Range 29 East, NMPM

Section 23: N/2N/2
Section 24: All
Section 25: All
Section 26: S/2; S/2SW/4NW/4; SE/4NE/4 and E/2SW/4NE/4

Township 17 South, Range 30 East, NMPM

Section 19: S/2SW/4
Section 30: NW/4

(2) That injection into any injection well shall be through 2 3/8-inch internally plastic lined tubing installed in a packer set at the approximate footage noted in Finding (3) above, with injection into the perforated and/or open hold interval as indicated in Finding No. (3) above; that the casing-tubing annulus shall be filled with an inert fluid and that a pressure gauge or approved leak detection device shall be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(3) That any injection well shall be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth to the top perforation, provided however, the Division Director may authorize a higher surface pressure upon satisfactory showing that such pressure will not result in fracturing of the confining strata.

designated the Phillips Burch Keely Waterflood Project and shall be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations and that monthly progress reports of the waterflood project herein authorized shall be submitted to the Division in accordance with Rules 706 and 1115 of the Division Rules and Regulations.

(5) That no injection shall take place in any injection well located within one-half mile of the following wells until that well has either been re-plugged or is shown to have been adequately plugged and abandoned or have been cemented in a manner that is satisfactory to the supervisor of the Division's district office at Artesia.

WELL NAME AND NO.	LOCATION	SECTION
Phillips Petroleum Co. Grayburg Deep Unit #6	Unit C	30 - T17S, R30E
Phillips Petroleum Co. Grayburg Deep Unit #4	Unit L	30 - T17S, R30E
Phillips Petroleum Co. Grayburg Deep Unit #5	Unit A	25 - T17S, R29E

(6) That the project area may be expanded administratively by the Division Director upon completion of additional injection wells or by the completion of additional production wells, provided it can be shown that such production wells are affected by the injection of water into the Grayburg-San Andres formations.

(7) That the Burch-Keely Waterflood Project shall be considered separate and distinct lease waterflood projects on the portions of Keely A Fed, Keely B Fed, Keely C Fed, Dexter Fed, Burch BB Fed and Burch C Fed Leases covering that area described in Order (1). The portion of each lease in the above described project area shall receive a waterflood allowable equal to the ability of the wells on that portion of the lease to produce. Allowables as well as production accounting shall be on an individual lease basis.

(8) That the Division Director is hereby authorized to approve such additional producing wells and injection wells at orthodox and unorthodox locations within the boundaries of the project area as may be necessary to complete an efficient production and injection pattern,

provided said wells are drilled no closer than 330 feet to the outer boundary of the project area nor closer than 10 feet to any lease boundary, quarter-quarter section or subdivision inner boundary. To obtain such approval, the project operator shall file proper application with the Division, which application, if it seeks authorization to convert additional wells to injection or to drill additional production or injection wells shall include the following:

(a) A plat identifying the project area and the individual wells contained therein and showing the location of the proposed well and offset operators.

(b) A schematic drawing of any proposed injection well which fully describes the casing, tubing, packer, monitoring equipment, perforated and/or open hole interval, and depth.

(c) A letter stating that all offset operators to the proposed well have been furnished a complete copy of the application and the date of notification.

(d) Such other applicable requirements as may be contained in Rule 701 of the Division Rules and Regulations.

The Division Director may approve the proposed well if, within 20 days after receiving the application, no objection to the proposal is received. The Director may grant immediate approval, provided waivers of objection are received from all offset operators.

(9) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Richard L. Stamets
Director

S E A L

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

RECEIVED
NOV 1984
OIL CONSERVATION DIVISION

APPLICATION FOR AUTHORIZATION TO INJECT

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Application qualifies for administrative approval? [ ] yes [XX] no

II. Operator: Phillips Oil Company

Address: 4001 Penbrook Odessa, Texas 79762

Contact party: T. H. McLemore Phone: (915) 367-1257

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 [XX] 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: W. J. Mueller Title Sr. Engineering Specialist

Signature: W. J. Mueller 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. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division

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.

III. WELL DATA

A. See table. (All wells will use 2-3/8" O.D., 4.7#/ft., plastic lined tubing and a Baker AD-1, plastic coated packer).

B.

1.	Injection Formation:	Grayburg/San Andres
2.	Injection Interval:	± 2350' - 3500', perforated and open hole.
3.	Original Purpose:	Grayburg/San Andres production
4.	Perforated Intervals:	None outside GB/SA
5.	Producing Zones:	Upper - Seven Rivers @ ± 1500' Lower - Penn @ ± 9000'

RE/grayburg

BURCH-KEELY WATERFLOOD

PROPOSED INJECTION WELLS

Lease/Well No.	Location	TD (PBTD)	Type & Date Drilled	Hole Size	Casing Size & Wt.	Setting Depth	Cmt	TOC	Packer Depth (Approx.)	Remarks
Burch BB Fed #6	660' FSL 660' FWL 19-17-29	3598' (3593')	Oil 4/29/42	10-3/4" 8" 6-1/4"	8-5/8" 28# 7" 20# 4-1/2(L) 9.5#	366' ~~2385'~~ 2773' 2737'-3599'	100 sx 100 sx 185 sx	Circ. (C) 1163' (C) 2737'	2300'	Perfs ± 2400'- 3558'
Burch BB Fed #10	660' FNL 1980' FWL 30-17-30	3254'	Oil 4/20/44	11"* 7-7/8"*	8-5/8" 24# 7" 20#	508' 2911'	50 sx 100 sx	311' (C) 1502' (C)	2300'	Perfs 2572'-2690', O.H. 2911'-3246'
Burch BB Fed #19	660' FNL 660' FEL 23-17-29	3400'	Oil 2/20/71	12-1/4" 7-7/8"	8-5/8" 20# 4-1/2" 9.5#	394' 3400'	100 sx 300 sx	152' (C) 2083' (C)	2400'	Perfs 2463'-3169'
Burch C Fed #17	660' FNL 1980' FWL 23-17-29	3356'	Oil 4/03/71	12-1/4" 7-7/8"	8-5/8" 20# 4-1/2" 9.5#	380' 3353'	100 sx 300 sx	137' (C) 1883' (C)	2350'	Perfs 2390'-3218'
Keely A Fed #5	2310' FSL 330' FEL 24-17-29	3613'	Oil 11/16/72	12-1/4" 10" 8-1/4"	10-3/4" 40# 8-5/8" 24# 7" 20#	305' 518' 2727'	None (Pulled) 50 sx 100 sx	 172' (C) 1765' (C)	2400'	Perfs 2479'-2525', O.H. 2727'-3613'
Keely A Fed #7	1980' FSL 1980' FWL 24-17-29	3569'	Oil 9/29/43	10-3/4"* 8-1/4"* 6-1/4"*	8-5/8" 28# 7" 20# 4-1/2"(L) 9.5#	430' 2738' 2703'-3569'	65 sx 100 sx 100 sx	141' (C) 1776' (C) 2703'	2300'	Perfs 2342'-3488'
Keely A Fed #9	1980' FNL 660' FWL 24-17-29	3527' (3521')	Oil 12/10/43	10-3/4" 8-1/4" 6-1/4"	8-5/8" 24# 7" 20# 4-1/2"(L) 9.5#	416' 2749' 2719'-3527'	50 sx 100 sx 135 sx	295' (C) 1787' (C) 2719' (C)	2250'	Perfs 2333'-3481'
Keely A Fed #15	1650' FNL 2310' FEL 24-17-29	3519' (3509')	Oil 5/9/72	10-3/4" 8-1/4" 6-1/4"	8-5/8" 24# 7" 20# 4-1/2"(L) 9.5#	450' 2796' 2746'-3515'	75 sx 100 sx 150 sx	109' (C) 1834' (C) 2746'	2300'	Perfs 2376'-3468'

RE2.1/burch

Lease/Well No.	Location	TD (PBTD)	Type & Date Drilled	Hole Size	Casing Size & Wt.	Setting Depth	Cmt	TOC	Packer Depth (Approx.)	Remarks
Keely B Fed #24	660' FSL 660' FWL 24-17-29	13,341' (3550')	Oil 2/01/53	15-1/2" 12-1/4" 8-3/4"	13-3/8" 61# 9-5/8" 36# 7" 23,26,&29#	324' 3452' 3702'-11,148'	650 sx 2350 sx 515 sx	Circ. (C) Circ. (C) 6495' (T.S.)	2300'	75 sx cmt. 3550'-3702' Perfs 2342'-3393', O.H. 3452'-3550'
Keely B Fed #6	660' FNL 1980' FWL 26-17-29	3185'	Oil 1/01/44	10-3/4" 8-1/4"	8-5/8" 23# 7" 20#	420' 2819'	50 sx 100 sx	197' (C) 1857' (C)	2350'	Perfs 2426'-2583', O.H. 2819'-3158'
Keely B Fed #7	1980' FNL 1980' FEL 26-17-29	2987'	Oil 2/21/45	10"* 8-1/4"*	8-5/8" 24# 7" 20#	414' 2823'	50 sx 100 sx	56' (C) 1870' (C)	2300'	Perfs 2478'-2492', O.H. 2823'-2987'
Keely B Fed #10	1980' FSL 660' FEL 26-17-29	3166' (2930')	Oil 11/27/44	10"* 8-1/4"*	8-5/8" 24# 7" 20#	415' 2980'	100 sx 100 sx	Circ. (C) 2018' (C)	2400'	Perfs 2466'-2627', O.H. 2980'-3166'
Keely B Fed #11	660' FSL 1980' FEL 26-17-29	3126'	Oil 10/11/45	11" 7-7/8"	8-5/8" 24# 7" 20#	372' 2970'	50 sx 100 sx	175' (C) 1800' (B.L.)	2400'	Perfs 2454'-2619', O.H. 2970'-3126'
Keely C Fed #5	660' FSL 1980' FEL 24-17-29	3564' (3558')	Oil 3/11/43	10-3/4" 8-1/4" 6-1/4"*	8-5/8" 28# 7" 20# 4-1/2"(L) 9.5#	434' 2741' 2633'-3564'	75 sx 100 sx 150 sx	100' (C) 1779' (C) 2633'	2300'	Perfs 2400'-3478'
Keely C Fed #8	660' FNL 660' FEL 25-17-29	3605'	Oil 8/12/43	10"* 7-7/8"* 6-1/4"*	8-5/8" 24# 7" 20# 4-1/2"(L) 9.5#	459' 2848' 2815'-3605'	50 sx 100 sx 125 sx	101' (C) 1439' (C) 2815'	2400'	Perfs 2486'-3565'
Keely C Fed #10	1980' FNL 660' FWL 25-17-29	3165' (2951')	Oil 2/14/45	10" 8-1/4"	8-5/8" 24# 7" 20#	430' 3001'	50 sx 100 sx	210' (C) 2039' (C)	2400'	Perfs 2480'-2600, O.H. 3001'-3165'
Keely C Fed #12	1980' FNL 1980' FEL 25-17-29	3275'	Oil 5/22/44	10" 8"	8-5/8" 24# 7" 20#	460' 2860'	50 sx 100 sx	102' (C) 1638' (C)	2600'	Perfs 2628'-2643', O.H. 2860'-3275'

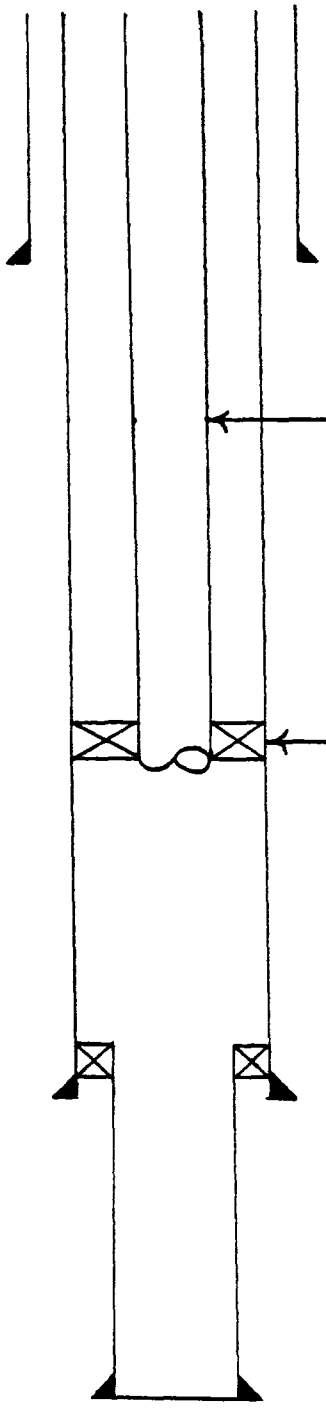
RE2.1/burch1

Lease/Well No.	Location	TD (PBTD)	Type & Date Drilled	Hole Size	Casing Size & Wt.	Setting Depth	Cmt	TOC	Packer Depth (Approx.)	Remarks
Keely C Fed #16	1980' FSL 1980' FWL 26-17-29	3018'	Oil 7/9/46	10" 8-1/4"*	8-5/8" 24# 7" 24#	410' 2817'	100 sx 100 sx	69' (C) 1855' (C)	2400'	Perfs 2471'-2491', O.H. 2817'-3018'
Keely C Fed #18	1980' FSL 1980' FWL 25-17-29	3262' (2870')	Oil 9/6/44	12" 10" 8-1/4"	10-3/4" 42# 8-5/8" 24# 7" 20#	260' 474' 2921'	None (Pulled) 150 sx 100 sx	Circ. (C) 1959' (C)	2600'	Perfs 2650'-2900', O.H. 2921'-3262'
Keely C Fed #20	1980' FSL 660' FEL 25-17-29	3330' (3070')	Oil 3/31/47	12-1/2" 10" 7-7/8"	None 8-5/8" 24# 7" 20#	325' 523' 3119'	 100 sx 100 sx	 163' (C) 1710' (C)	2500'	Perfs + 2500'-3100', O.H. 3119'-3330'
Keely C Fed #21	660' FSL 660' FWL 26-17-29	3367'	Oil 5/12/46	10-3/4" 8-1/4" 6-1/4"	8-5/8" 24# 7" 20# 4-1/2"(L) 9.5#	396' 2858' 2836'-3363'	250 sx 100 sx 115 sx	Circ. (C) 1896' (C) 2836'	2300'	Perfs 2378'-3256'
Keely C Fed #23	660' FSL 660' FWL 25-17-29	3227'	Oil 8/09/45	10"* 7-7/8"*	8-5/8" 24# 7" 20#	430' 3055'	50 sx 100 sx	72' (C) 1690' (B.L.)	2450'	Perfs 2536'-2673', O.H. 3055'-3227'
Keely C Fed #25	660' FSL 1980' FEL 25-17-29	3428' (3120')	Oil 6/03/47	12" 10" 7-7/8"	10-3/4" 40# 8-5/8" 24# 7" 20#	225' 514' 3167'	None (Pulled) 50 sx 125 sx	199' (C) 1406' (C)	2550'	Perfs 2611'-2786', O.H. 3167'-3428'

*Estimate

RE2.1/burch2

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, BURCH BB FED #6
660' FSL AND 660' FWL
UNIT M, SECTION 19, T-17-S, R-30-E



8 5/8" OD @ 366', 10 3/4" hole
Cmt. w/100 sx, cmt circ.(c)

2 3/8" OD, plastic lined tubing
@ ± 2300'

Baker AD-1, externally and
internally plastic coated @ ± 2300'

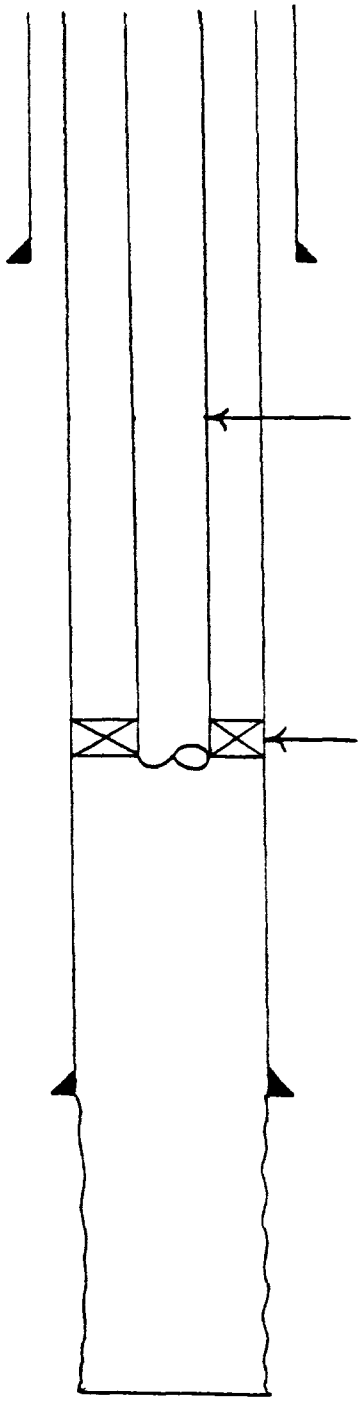
7" OD @ 2773' (~~2385~~), 8" hole
Cmt. w/100sx, TOC @ 1163'(c)

Injection Interval 2798' - 3558'

4 1/2" Liner, 2737'-3599', 6 1/4"
hole. Cmt. w/185 sx, TOC @ 2737'
TD @ 3598'

RE5/burch20

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, BURCH BB FED #10
660' FNL AND 1980' FWL
UNIT C, SECTION 30, T-17-S, R-30-E



8 5/8" OD @ 523', 11" Hole
Cmt. w/50 sx, TOC @ 326' (c)

2 3/8" OD, plastic lined tubing
@ ± 2300'

Baker AD-1, externally and
internally plastic coated @ ± 2300'

7" OD @ 2925', 7 7/8" hole*
Cmt. w/100sx, TOC @ 1516' (c)

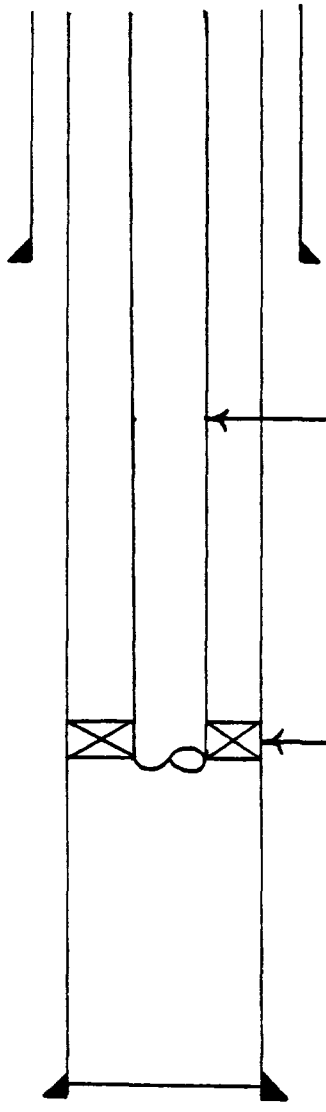
Injection Interval ± 2350' - 3254'

TD @ 3254'

*estimate

REF/burch1

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, BURCH BB FED #19
660' FNL AND 660' FEL
UNIT A, SECTION 23, T-17-S, R-29-E



8 5/8" OD @ 394', 12 1/4" hole
Cmt. w/100 sx, TOC @ 152'(c)

2 3/8" OD, plastic lined tubing
@ ± 2400'

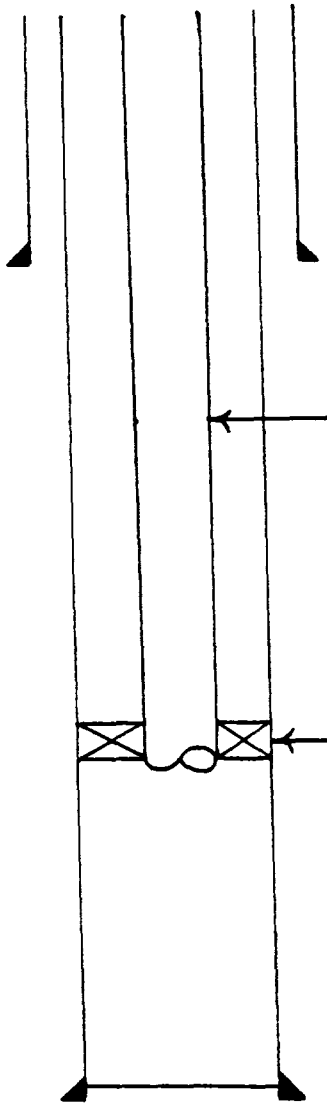
Baker AD-1, externally and
internally plastic coated @ ± 2400'

Injection Interval 2463'-3169'

4 1/2" OD @ 3400', 7 7/8" hole
Cmt. w/300sx, TOC @ 2083'
TD @ 3400'

RE5/burch22

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, BURCH C FED #17
660' FNL AND 1980' FWL
UNIT C, SECTION 23, T-17-S, R-29-E



8 5/8" OD @ 380', 12 1/4" hole
Cmt. w/100 sx, TOC @ 137'(c)

2 3/8" OD, plastic lined tubing
@ ± 2350'

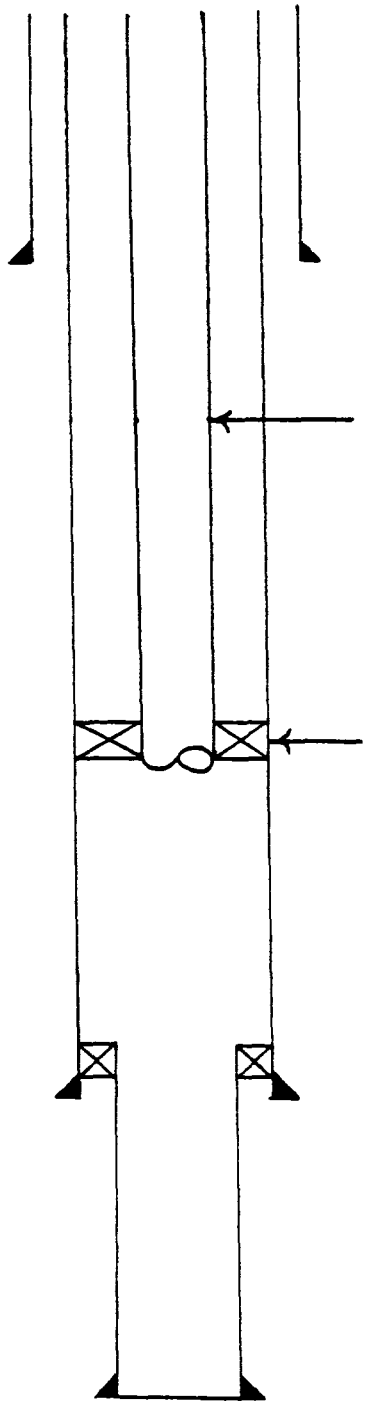
Baker AD-1, externally and
internally plastic coated @ ± 2350'

Injection Interval 2390'-3218'

4 1/2" OD @ 3353', 7 7/8" hole
Cmt. w/300sx, TOC @ 2039'(c)
TD @ 3356'

RE5/burch21

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY A FED #7
1980' FSL AND 1980' FWL
UNIT K, SECTION 24, T-17-S, R-29-E



8 5/8" OD @ 430', 10 3/4" hole*
Cmt. w/65 sx, TOC @ 141'(c)

2 3/8" OD, plastic lined tubing
@ ± 2300'

Baker AD-1, externally and
internally plastic coated @ ± 2300'

7" OD @ 2738', 8 1/4" hole*
Cmt. w/100sx, TOC @ 1776' (c)

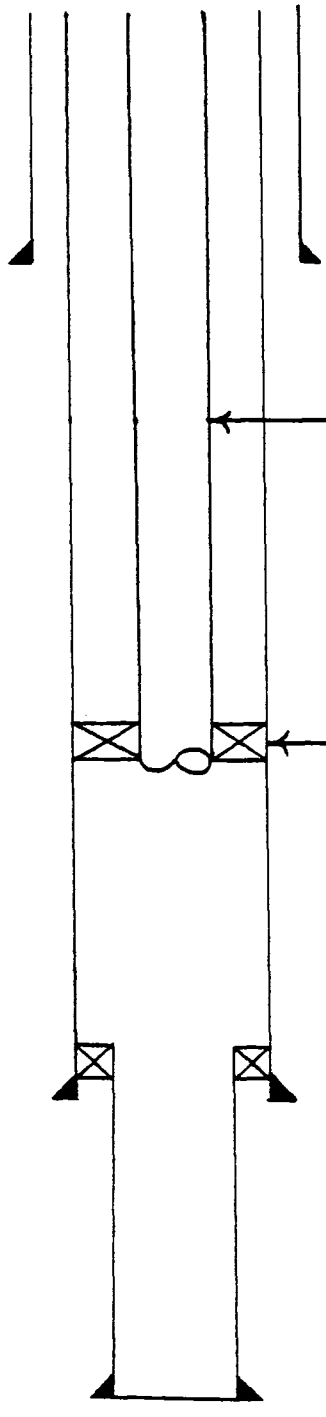
Injection Interval 2342' - 3488'

4 1/2" OD Liner, 2703'-3569', 6 1/4"
hole* Cmt. w/100 sx, TOC @ 2703'
TD @ 3569'

*estimate

RE5/burch14

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY A FED #9
1980' FNL AND 660' FWL
UNIT E, SECTION 24, T-17-S, R-29-E



8 5/8" OD @ 416', 10 3/4" hole
Cmt. w/50 sx, TOC @ 295'(c)

2 3/8" OD, plastic lined tubing
@ ± 2250'

Baker AD-1, externally and
internally plastic coated @ ± 2250'

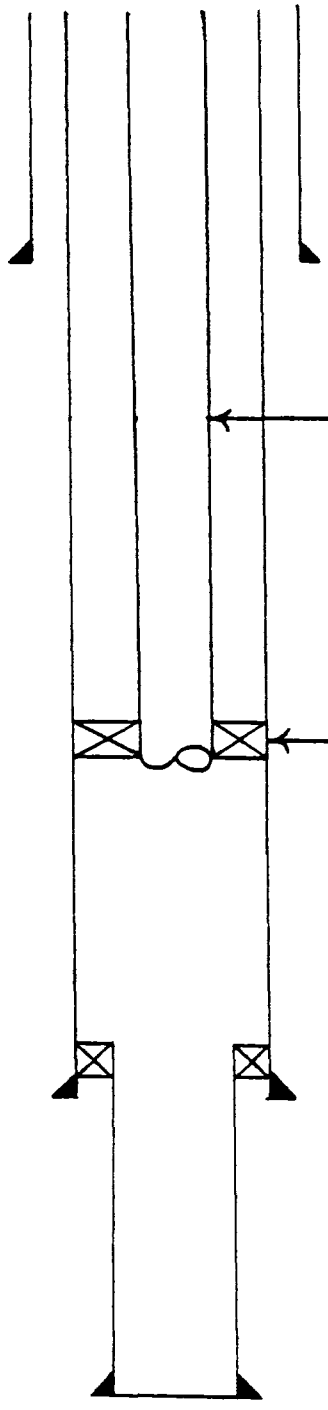
7" OD @ 2749', 8 1/4" hole
Cmt. w/100sx, TOC @ 1787'

Injection Interval 2333' - 3481'

4 1/2" Liner, 2719'-3527', 6 1/4"
hole. Cmt. w/135 sx, TOC @ 2719'(c)
TD @ 3527, PBTD @ 3521'

RE5/burch15

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY A FED #15
1650' FNL AND 2310' FEL
UNIT G, SECTION 24, T-17-S, R-29-E



8 5/8" OD @ 450', 10 3/4" hole
Cmt. w/75 sx, TOC @ 109'(c)

2 3/8" OD, plastic lined tubing
@ ± 2300'

Baker AD-1, externally and
internally plastic coated @ ± 2300'

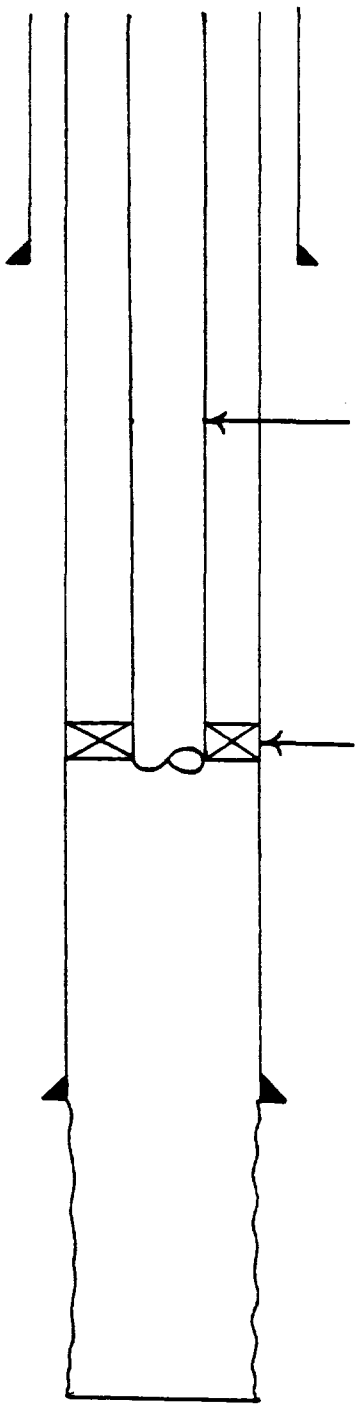
7" OD @ 2796', 8 1/4" hole
Cmt. w/100sx, TOC @ 1834'(c)

Injection Interval 2376' - 3468'

4 1/2" OD Liner, 2746'-3515', 6 1/4"
hole. Cmt. w/150 sx, TOC @ 2746'
TD @ 3519, PBTD @ 3509'

RE5/burch16

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY B FED #6
660' FNL AND 1980' FWL
UNIT C, SECTION 25, T-17-S, R-29-E



8 5/8" OD @ 420', 10 3/4" hole*
Cmt. w/50 sx, TOC @ 197' (c)

2 3/8" OD, plastic lined tubing
@ ± 2350'

Baker AD-1, externally and
internally plastic coated @ ± 2350'

7" OD @ 2819', 8 1/4" hole
Cmt. w/100sx, TOC @ 1857' (c)

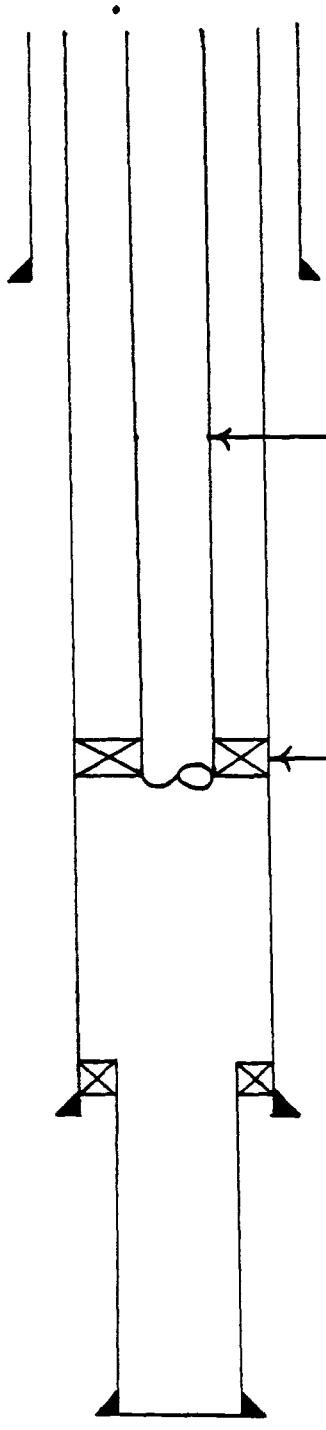
Injection Interval 2426' - 3158'

TD @ 3158'

*estimate

RE5/burch3

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY C FED #5
660' FSL AND 1980' FEL
UNIT O, SECTION 24, T-17-S, R-29-E



8 5/8" OD @ 434', 10 3/4" hole
Cmt. w/75 sx, TOC @ 100'(c)

2 3/8" OD, plastic lined tubing
@ ± 2300'

Baker AD-1, externally and
internally plastic coated @ ± 2300'

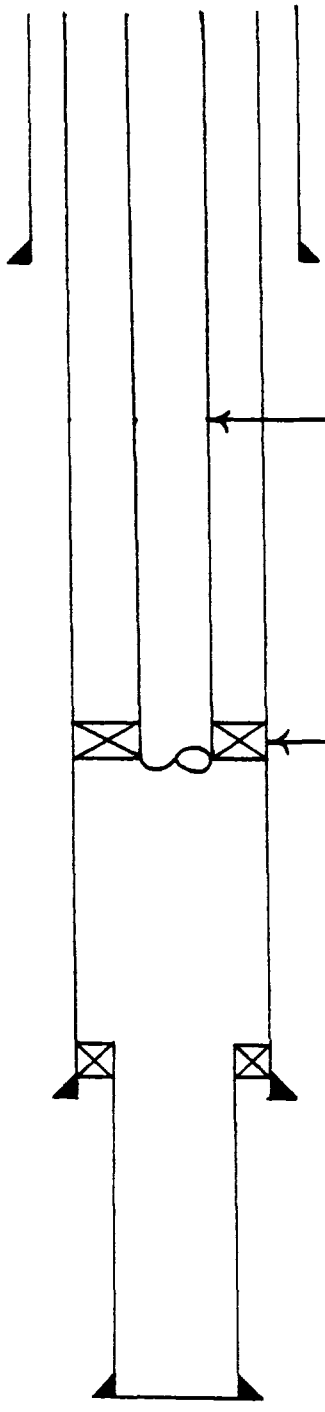
7" OD @ 2741', 8 1/4" hole
Cmt. w/100sx, TOC @ 1779'(c)

Injection Interval 2400' - 3478'

4 1/2" OD Liner, 2633'-3564', 6 1/4"
hole. Cmt. w/150 sx, TOC @ 2633'
TD @ 3564', PBTD @ 3558'

RE5/burch17

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY C FED #8
660' FNL AND 660' FEL
UNIT A, SECTION 25, T-17-S, R-29-E



8 5/8" OD @ 459', 10" hole*
Cmt. w/50 sx, TOC @ 101'(c)

2 3/8" OD, plastic lined tubing
@ ± 2400'

Baker AD-1, externally and
internally plastic coated @ ± 2400'

7" OD @ 2848', 7 7/8" hole*
Cmt. w/100sx, TOC @ 1439'(c)

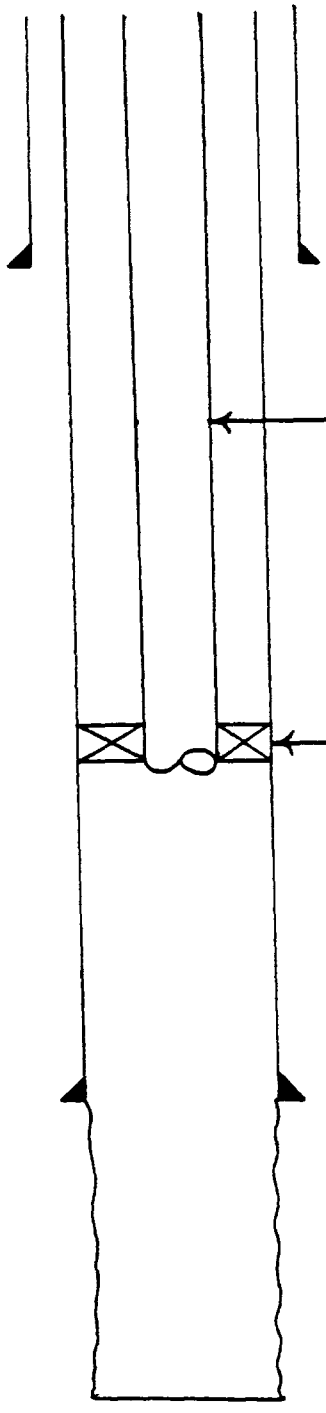
Injection Interval 2486' - 3560'

4 1/2" OD Liner, 2815'-3605', 6 1/4"
hole. Cmt. w/125 sx, TOC @ 2815'
TD @ 3605'

*estimate

RE5/burch18

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY C FED #10
1980' FNL AND 660' FWL
UNIT E, SECTION 25, T-17-S, R-29-E



8 5/8" OD @ 430', 10" hole
Cmt. w/50 sx, TOC @ 210' (c)

2 3/8" OD, plastic lined tubing
@ ± 2400'

Baker AD-1, externally and
internally plastic coated @ ± 2400'

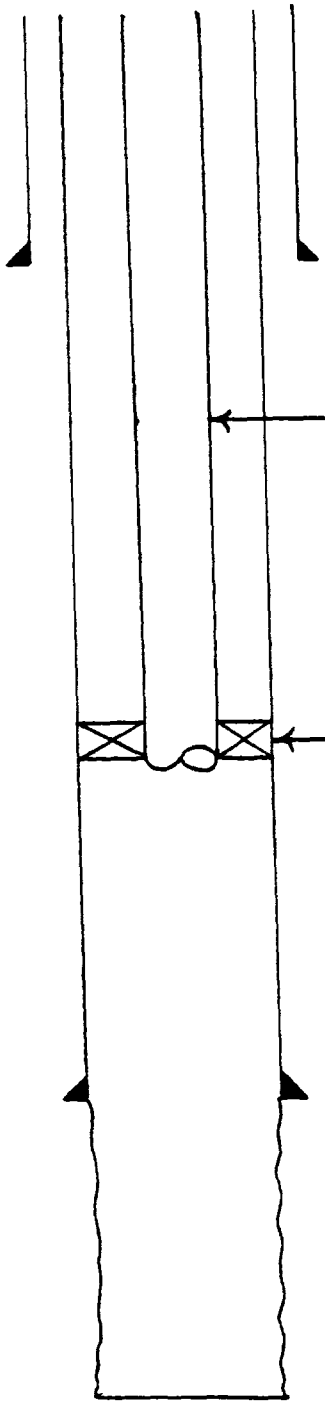
7" OD @ 3001', 8 1/4" hole
Cmt. w/100sx, TOC @ 2039' (c)

Injection Interval 2480' - 3165'

TD @ 3165'

RE5/burch4

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY C FED #12
1980' FNL AND 1980' FEL
UNIT G, SECTION 25, T-17-S, R-29-E



8 5/8" OD @ 460', 10" hole
Cmt. w/50 sx, TOC @ 102' (c)

2 3/8" OD, plastic lined tubing
@ ± 2600'

Baker AD-1, externally and
internally plastic coated @ ± 2600'

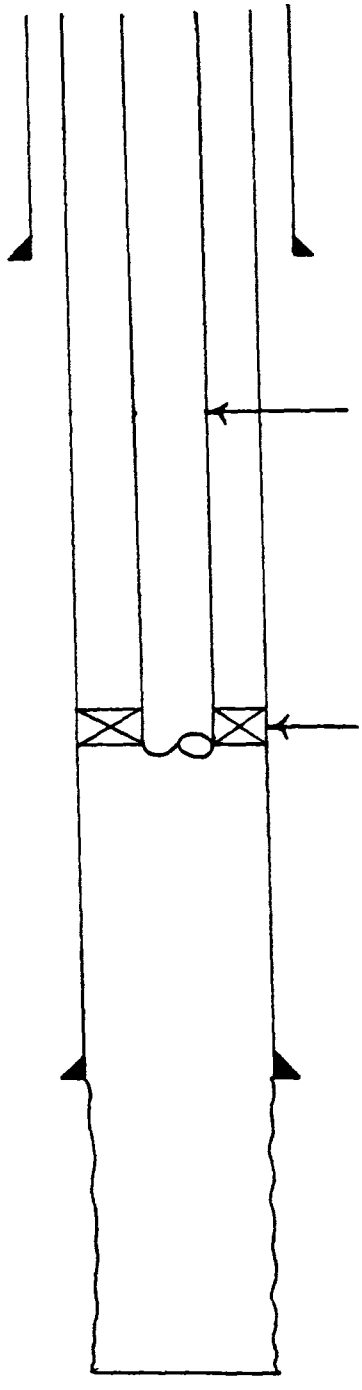
7" OD @ 2860', 8" hole
Cmt. w/100sx, TOC @ 1638' (c)

Injection Interval 2680' - 3275'

TD @ 3275'

RE5/burch5

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY C FED #16
1980' FSL AND 1980' FWL
UNIT K, SECTION 26, T-17-S, R-29-E



8 5/8" OD @ 410', 10" hole
Cmt. w/100 sx, TOC @ 69'(c)

2 3/8" OD, plastic lined tubing
@ ± 2400'

Baker AD-1, externally and
internally plastic coated @ ± 2400'

7" OD @ 2817', 8 1/4" hole*
Cmt. w/100sx, TOC @ 1855' (c)

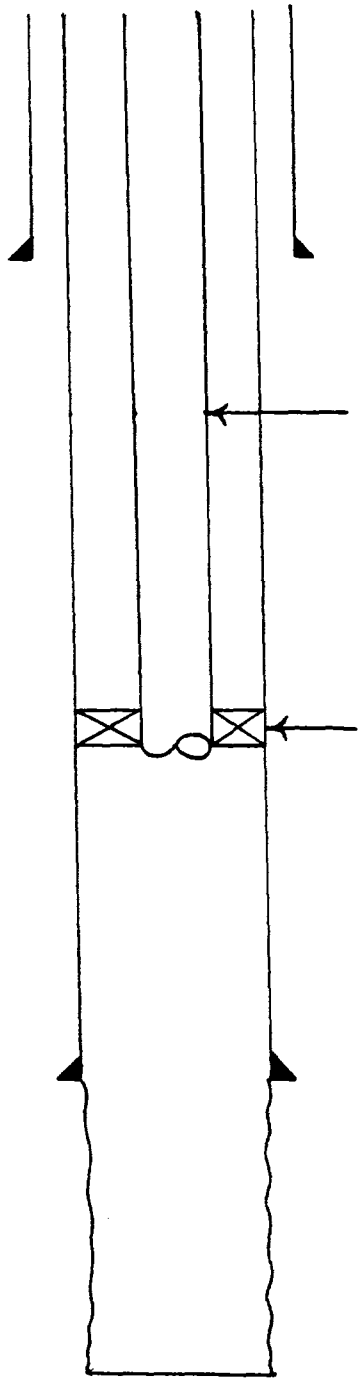
Injection Interval 2471' - 3018'

TD @ 3018'

*estimate

RE5/burch13

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY C FED #20
1980' FSL AND 660' FEL
UNIT I, SECTION 25, T-17-S, R-29-E



8 5/8" OD @ 523', 12 1/2" & 10" hole
Cmt. w/100 sx, TOC @ 163' (c)

2 3/8" OD, plastic coated tubing
@ ± 2500'

Baker AD-1, externally and
internally plastic coated @ ± 2500'

7" OD @ 3119', 7 7/8" hole*
Cmt. w/100sx, TOC @ 1710' (c)

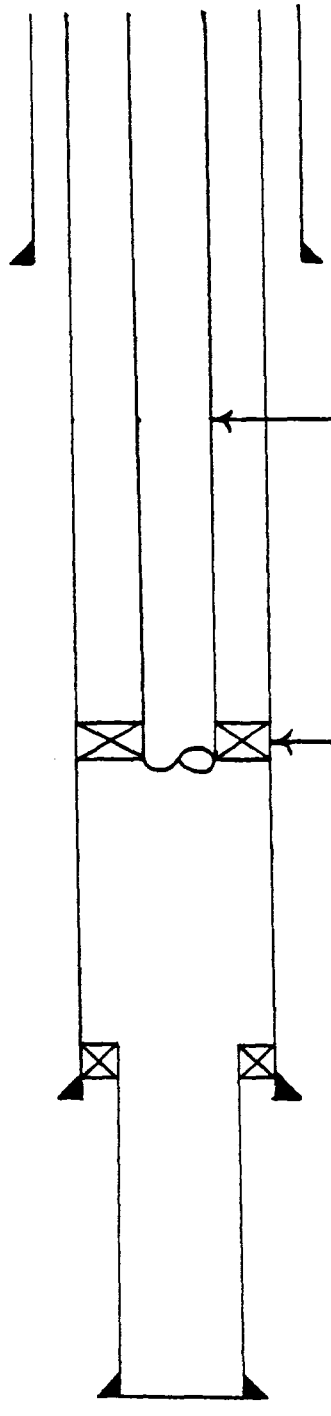
Injection Interval ± 2600' - 3330'

TD @ 3330'

*estimate

RE5/burch7

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY C FED #21
660' FSL AND 660' FWL
UNIT M, SECTION 26, T-17-S, R-29-E



8 5/8" OD @ 396', 10 3/4" hole
Cmt. w/250 sx, Circ.(c)

2 3/8" OD, plastic lined tubing
@ ± 2300'

Baker AD-1, externally and
internally plastic coated @ ± 2300'

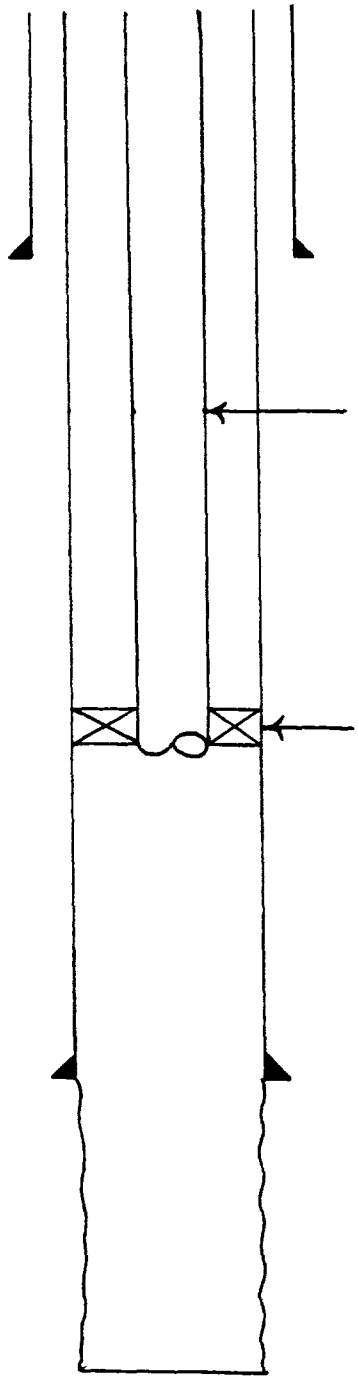
7" OD @ 2858', 8 1/4" hole
Cmt. w/100sx, TOC @ 1896'(c)

Injection Interval 2378' - 3256'

4 1/2" OD Liner, 2836'-3363', 6 1/4"
hole. Cmt. w/115 sx, TOC @ 2836'
TD @ 3367'

RE5/burch19

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY C FED #25
660' FSL AND 1980' FEL
UNIT O, SECTION 25, T-17-S, R-29-E



8 5/8" OD @ 514', 12" & 10" hole
Cmt. w/50 sx, TOC @ 199' (c)

2 3/8" OD, plastic lined tubing
@ ± 2550'

Baker AD-1, externally and
internally plastic coated @ ± 2550'

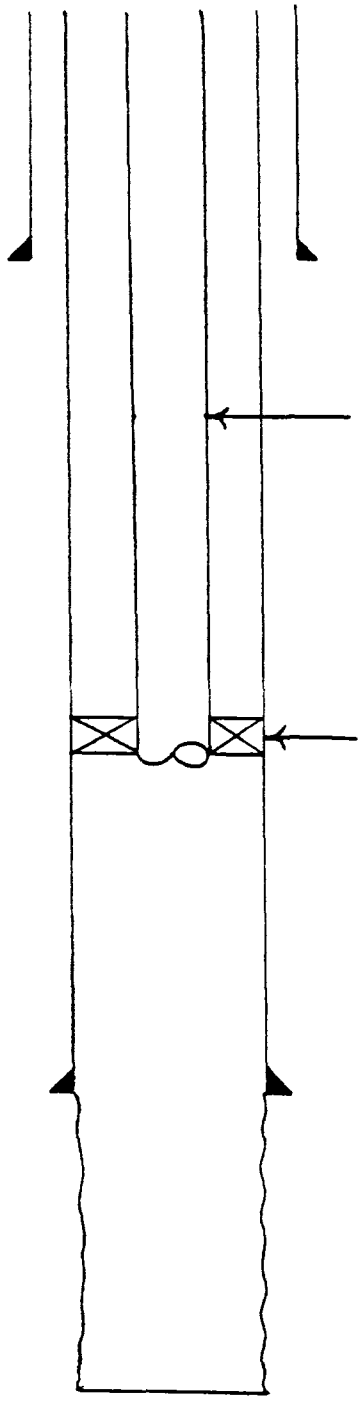
7" OD @ 3167', 7 7/8" hole
Cmt. w/125sx, TOC @ 1406' (c)

Injection Interval 2611' - 3428'

TD @ 3428'

RE5/burch9

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY B FED #11
660' FSL AND 1980' FEL
UNIT O, SECTION 26, T-17-S, R-29-E



8 5/8" OD @ 372', 11" hole
Cmt. w/50 sx, TOC @ 175'(c)

2 3/8" OD, plastic coated tubing
@ ±

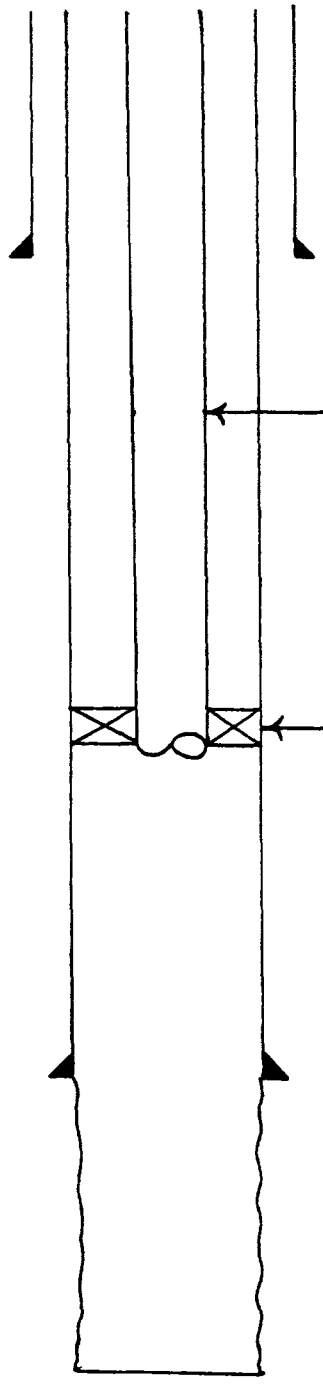
Baker AD-1, externally and
internally plastic coated @ ± 2400

Injection Interval 2454' - 3126'

7" OD @ 2970', 7 7/8" hole
Cmt. w/100sx, TOC @ 1800' (B.L.)

TD @ 3126'

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY B FED #10
1980' FSL AND 660' FEL
UNIT I, SECTION 26, T-17-S, R-29-E



8 5/8" OD @ 415', 10" hole*
Cmt. w/100 sx, Circ. (c)

2 3/8" OD, plastic lined tubing
@ ± 2400'

Baker AD-1, externally and
internally plastic coated @ ± 2400'

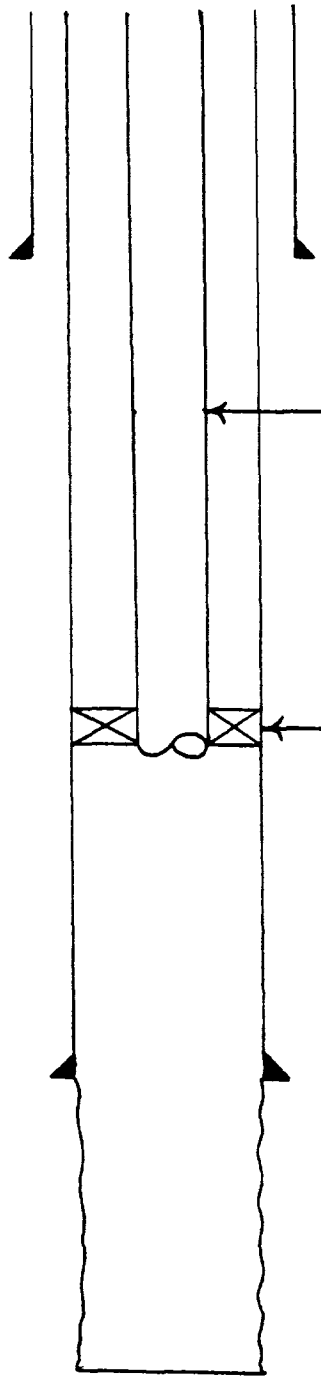
Injection Interval 2466' - 3166'

7" OD @ 2980', 8 1/4" hole*
Cmt. w/100sx, TOC @ 2018' (c)

TD @ 3166'

*estimate

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY B FED #7
1980' FNL AND 1980' FEL
UNIT G, SECTION 26, T-17-S, R-29-E



8 5/8" OD @ 414', 10" hole*
Cmt. w/50 sx, TOC @ 56' (c)

2 3/8" OD, plastic lined tubing
@ ± 2400'

Baker AD-1, externally and
internally plastic coated @ ± 2400'

Injection Interval 2478' - 2987'

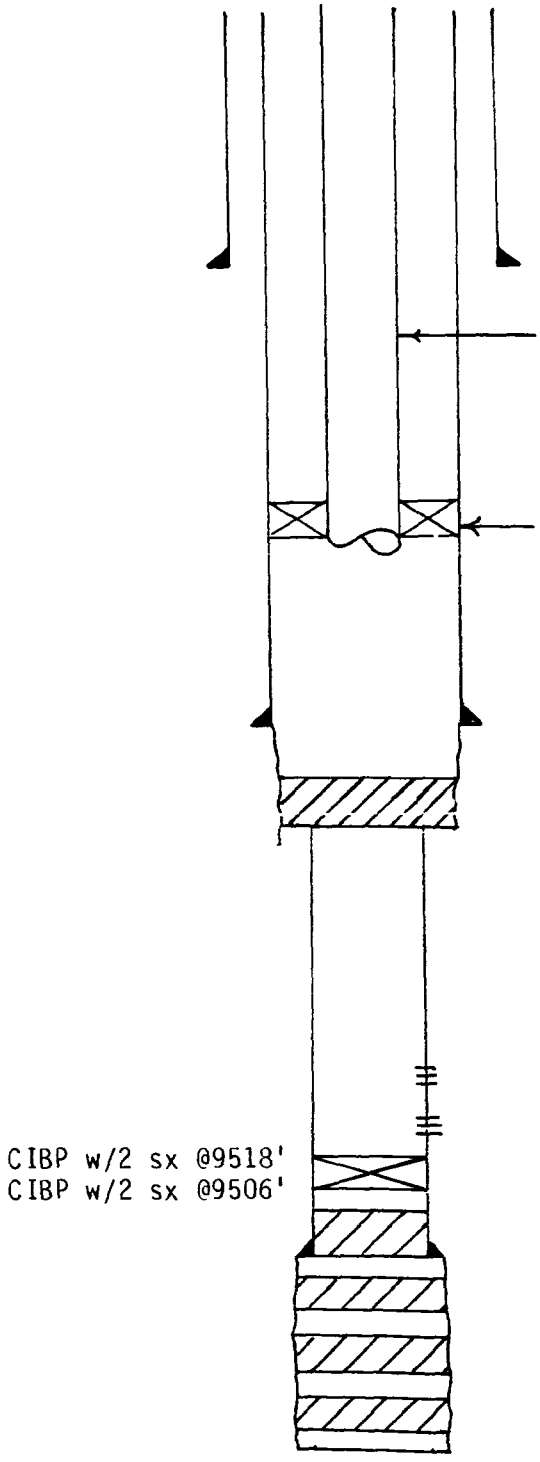
7" OD @ 2823', 8 1/4" hole*
Cmt. w/100sx, TOC @ 1870' (c)

TD @ 2987'

*estimate

RFF/burch10

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY B FED #24
660' FSL AND 560' FWL
UNIT M, SECTION 24, T-17-S, R-29-E



13 3/8" OD @ 324', 15 1/2" Hole
Cmt. w/650 sx, TOC @ Circ.(c)

2 3/8" OD, plastic lined tubing @
± 2300'

Baker AD-1, externally and internally
plastic coated @ ± 2300'

Injection Interval 2342'-3550'

9 5/8" OD @ 3452', 12 1/4" hole
Cmt w/2350 sx, TOC @ circ.(c)

Cut & pulled 7" @ 3722'
Cmt plug and bridge 3550'-3722'

9050'-9238'
9265'-9299'

CIBP w/2 sx @9518'
CIBP w/2 sx @9506'

40 sx cmt 11,100'-11,150'

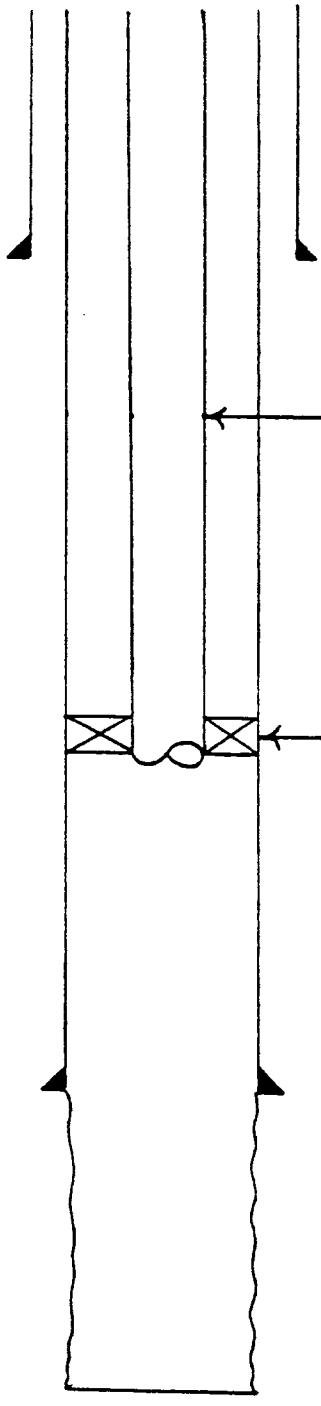
7" OD @ 11,148', 8 3/4" hole
Cmt. w/515 sx, TOC @ 6495' (T.S.)
46 sx cmt 11,450'-11,600'

59 sx cmt 11,900'-12,050'

61 sx cmt 13,025'-13,175'
TD @ 13,341', PBTD @ 3550'

RE5/burch23

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY C FED #23
660' FSL AND 660' FWL
UNIT M, SECTION 25, T-17-S, R-29-E



8 5/8" OD @ 430', 10" hole*
Cmt. w/50 sx, TOC @ 72' (c)

2 3/8" OD, plastic lined tubing
@ ± 2450'

Baker AD-1, externally and
internally plastic coated @ ± 2450'

7" OD @ 3055', 7 7/8" hole*
Cmt. w/100sx, TOC @ 1690' (B.L.)

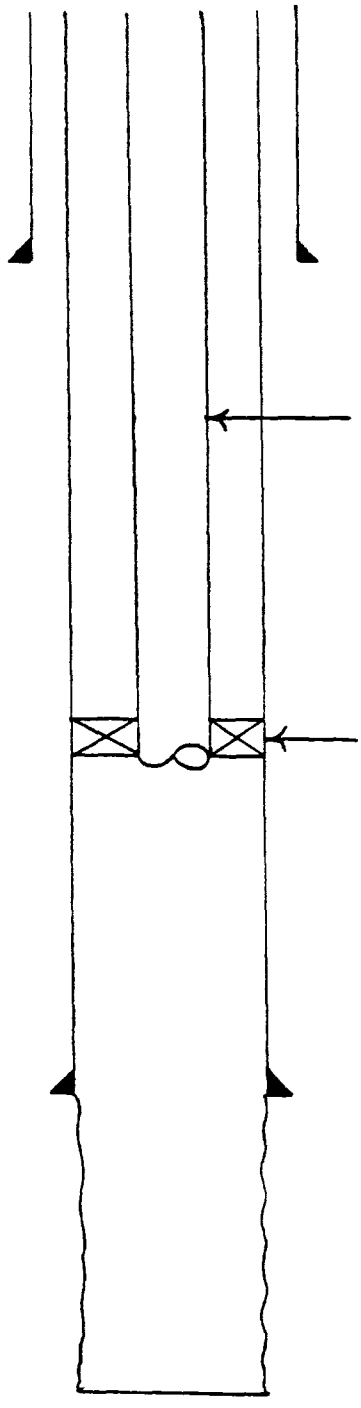
Injection Interval 2536' - 3227'

TD @ 3227'

*estimate

RE5/burch8

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY C FED #18
1980' FSL AND 1980' FWL
UNIT K, SECTION 25, T-17-S, R-29-E



8 5/8" @ 474', 12" & 10" hole
Cmt. w/150 sx, TOC @ Circ (c)

2 3/8" OD, plastic lined tubing
@ ± 2600'

Baker AD-1, externally and
internally plastic coated @ ± 2600'

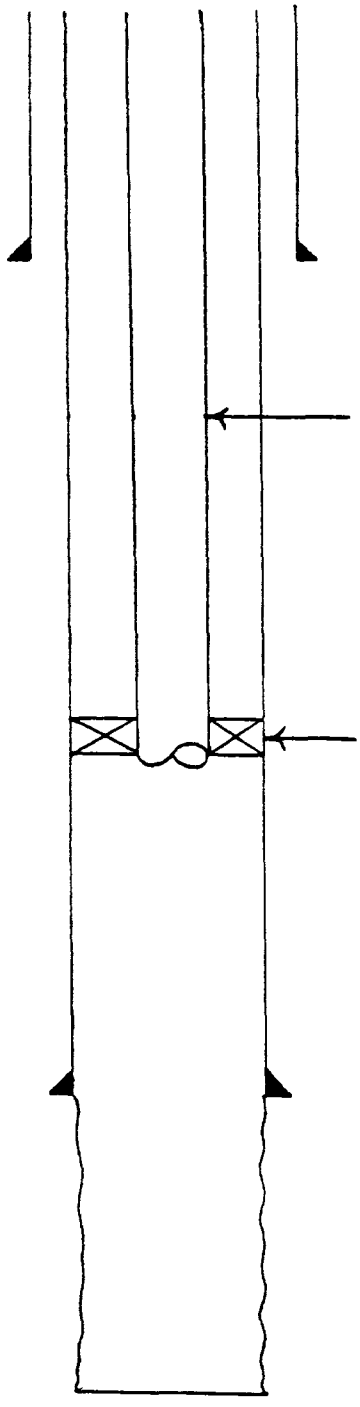
7" OD @ 2921', 8 1/4" hole
Cmt. w/100sx, TOC @ 1959' (c)

Injection Interval ± 2650' - 3262'

TD @ 3262'

PEB/burch6

BURCH-KEELY WATERFLOOD
PROPOSED COMPLETION, KEELY A FED #5
2310' FSL AND 330' FEL
UNIT I, SECTION 24, T-17-S, R-29-E



8 5/8" OD @ 518', 12 1/4" & 10" Hole
Cmt. w/50 sx, TOC @ 172' (c)

2 3/8" OD, plastic lined tubing
@ ± 2400'

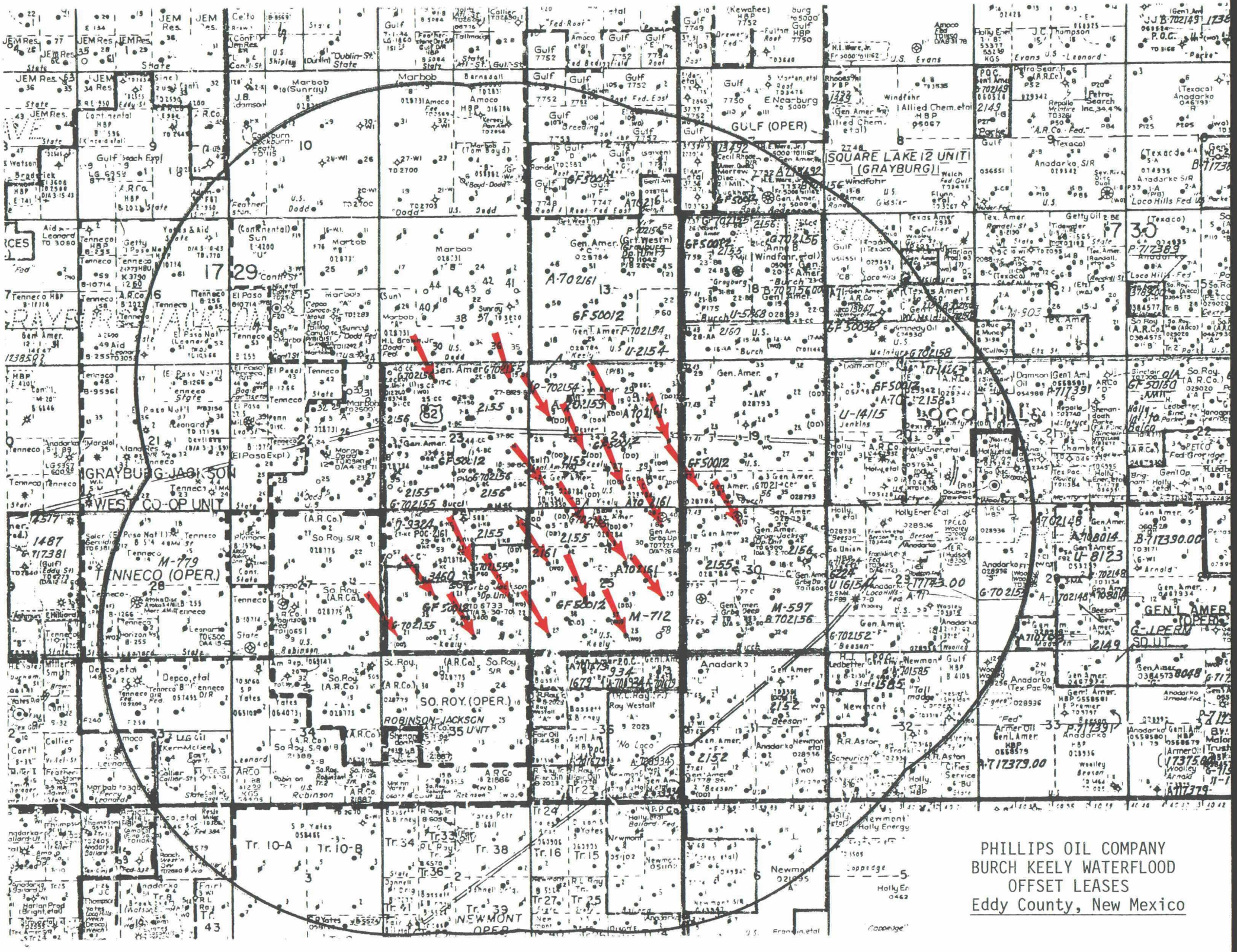
Baker AD-1, externally and
internally plastic coated @ ± 2400'

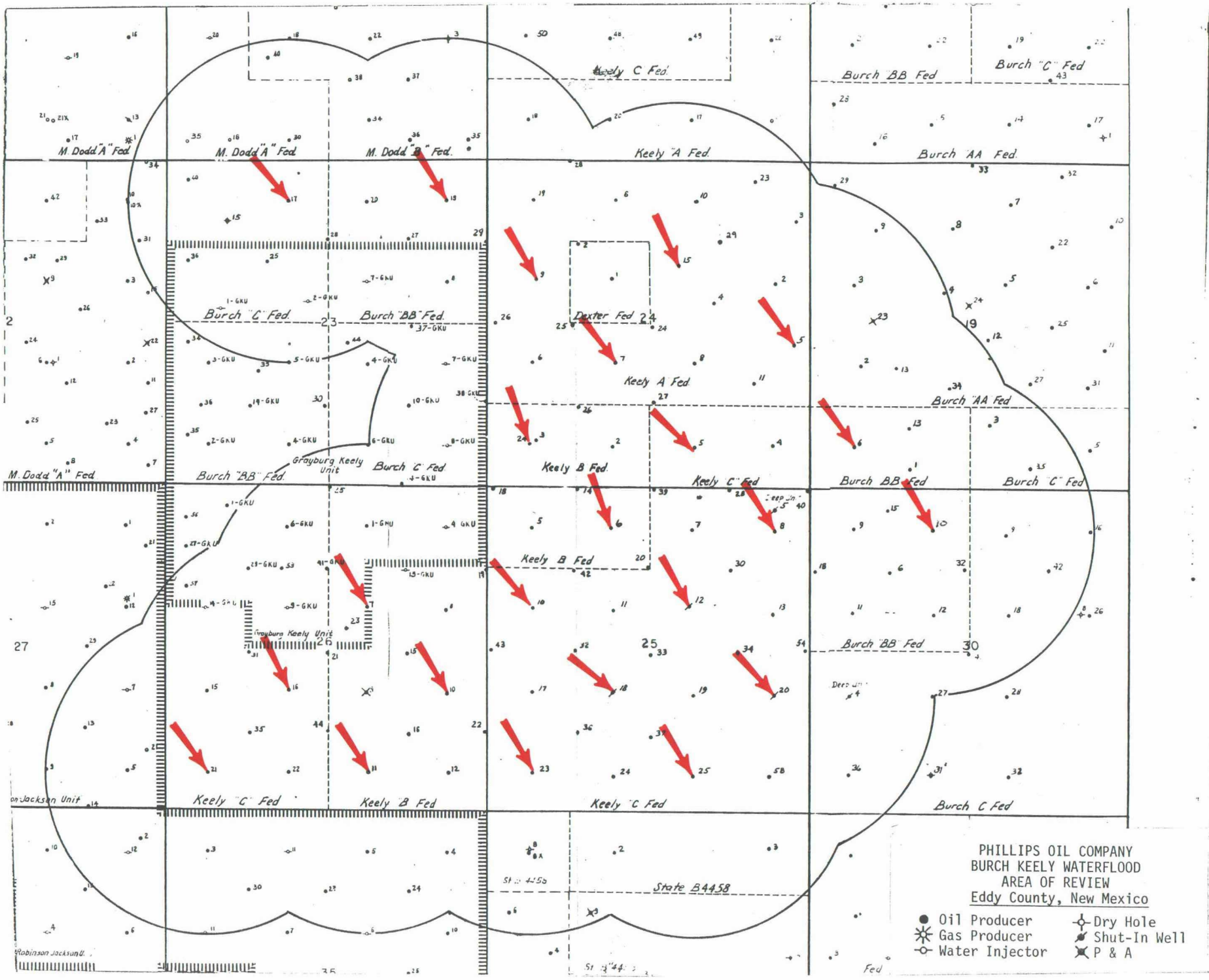
7" OD @ 2727', 8 1/4" hole
Cmt. w/100sx, TOC @ 1765' (c)

Injection Interval 2479' - 3613'

TD @ 3613'

RE5/burch


PHILLIPS OIL COMPANY
BURCH KEELY WATERFLOOD
OFFSET LEASES
Eddy County, New Mexico


M. Dodd "A" Fed.
M. Dodd "A" Fed.
M. Dodd "B" Fed.
Keely "C" Fed.
Keely "A" Fed.
Burch "BB" Fed
Burch "C" Fed
Burch "AA" Fed
Burch "C" Fed
Burch "BB" Fed
Dexter Fed
Keely "A" Fed
Keely "B" Fed
Keely "C" Fed
Burch "AA" Fed
Burch "BB" Fed
Burch "C" Fed
Grayburg Keely Unit
Keely "B" Fed
Keely "C" Fed
Burch "BB" Fed
Keely "C" Fed
Keely "B" Fed
Keely "C" Fed
Burch C Fed
State B4458
PHILLIPS OIL COMPANY
BURCH KEELY WATERFLOOD
AREA OF REVIEW
Eddy County, New Mexico
Oil Producer
Gas Producer
Water Injector
Dry Hole
Shut-In Well
P & A

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD	Type & Date Drilled	Hole Size	Size & Wt.	Casing Depth	Cmt	TOC	Remarks
Section 13, T-17-S, R-29-E									
Keely A Fed #17	O	3155'	Oil 2/16/71	12-1/4" 7-7/8"	8-5/8" 20# 4-1/2" 9.5#	407' 3155'	100sx 250sx	162' (C) 2058' (C)	Perfs 2489'-3091'
Keely A Fed #18	M	3226'	Oil 3/5/71	12-1/4" 7-7/8"	8-5/8" 20# 4-1/2" 9.5#	415' 3224'	100sx 325sx	170' (C) 2356 (B.L.)	Perfs 2479'-3119'
Keely A Fed #20	N	3200'	Oil 4/7/71	12-1/4" 7-7/8"	8-5/8" 20# 5-1/2" 14#	417' 3199'	100sx 300sx	168' (C) 1467' (C)	Perfs 2506'-3140'
Section 14, T-17-S, R-29-E									
M. Dodd A #18	M	3311'	Oil 7/28/56	12-1/4"* 7-7/8"*	8-5/8" 24# 5-1/2" 14#	493' 3239'	300sx 250sx	Circ. (C) 1796 (C)	O.H. 3239'-3311', perfs 2408'-3210'
M. Dodd A #30	N	3466'	Oil 3/22/84	12-1/4" 7-7/8"	8-5/8" 24# 5-1/2" 15.5#	399' 3466'	250sx 2000sx	Circ. 450' (T.S.)	Perfs 2762' - 3329'
M. Dodd B #3	I	3029'	P&A 9/17/40	17-1/2"* 11-3/4"* 9-5/8"*	12" 10-3/4" 40# 7" 20#	Pulled 280' 2292'	 150sx 100sx	 166' (c) 1872' (c)	O.H. 2292'-3029'. D&A No data available
M. Dodd B #18	K	2700'	P&A 4/4/67	12-1/4" 7-7/8"	8-5/8" 24# 4-1/2" 9.5#	518' 2700'	250sx 250sx	Circ. 1600' (T.S.)	Perfs 2436'-2447'. P&A see attached sketch.
M. Dodd B #34	O	3380'	Oil 9/5/71	12-1/4" 7-7/8"	8-5/8" 20# 5-1/2" 15.5#	457' 3380'	250sx 1700sx	Circ. Circ.	Perfs 2438' - 3334'
M. Dodd B #35	P	3510' (3500')	Oil 7/31/83	12-1/4" 7-7/8"	8-5/8" 24# 5-1/2" 15.5#	379' 3510'	250sx 1400sx	Circ. Circ.	Perfs 2840' - 3378'

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
Section 14, T-17-S, R-29-E (Cont.)										
M. Dodd B #36	O	3453' (3445')	Oil 2/20/84	12-1/4" 7-7/8"	8-5/8" 5-1/2"	24# 15.5 & 17#	336' 3453'	225sx 1050sx	Circ. Circ.	Perfs 2437' - 3336'
M. Dodd B #37	J	3460' (3436')	Oil 5/15/84	12-1/4" 7-7/8"	8-5/8" 5-1/2"	24# 15.5#	340' 3457'	225sx 1850sx	Circ. Circ.	Perfs 2620' - 3334'
M. Dodd B #38	O	3460' (3430')	Oil 5/9/84	12-1/4" 7-7/8"	8-5/8" 5-1/2"	24# 15.5#	347' 3445'	225sx 1300sx	Circ. Circ.	Perfs 2608' - 3355'
M. Dodd B #39	P	No record								
M. Dodd B #40	K	No record								
Section 19, T-17-S, R-30-E										
Burch AA Fed #2	L	3142'	Oil 8/15/29	12-1/2"* 11-1/2"* 8-1/4"*	12-1/4" 10" 6-5/8"	50# 10# 24#	368' 900' 2865'	15sx 20sx None	350' (c) 786' (c) -	O.H. 2865'-3142'
Burch AA Fed #3	E	3101'	Oil 5/12/32	12-1/2"* 8-1/4"*	10" 6-5/8"	40# 20#	373' 2783'	None None	- -	O.H. 2783'-3100'
Burch AA Fed #4	F	3131'	Oil 10/17/33	12-1/4"* 8-1/4"	10-1/4" 6-5/8"	40# 24#	385' 2801'	10sx None	344'(C)	O.H. 2801'-3131'
Burch AA Fed #9	D	3158' (3115')	Oil 12/19/37	12-1/4"* 9-5/8"* 7-7/8"*	10-3/4" 8-1/4" 7"	40# 30# 24#	325' 430' 2784'	None (Pulled) 50sx 100sx	245'(C) 1375'(C)	O.H. 2784'-3115'. Conv. to WI 10/57 CIBP @ 2730'(?) Perfs 2424'-2663'. Conv to production 1/23/74

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.	Casing Depth	Cmt	TOC	Remarks
Section 19, T-17-S, R-30-E (Cont.)									
Burch AA Fed #13	K	3247'	Oil 2/6/47	11"* 7-7/8"	8-5/8" 24# 7" 20#	478' 2712'	50sx 100sx	281'(C) 1303'	Junk in hole. Perfs 2540'-2589'
Burch AA Fed #23	E	3149'	Oil 6/8/49	11" 7-7/8"	8-5/8" 24# 7" 20#	455' 2497'	75sx 100sx	160'(C) 1088'(C)	O.H. 2497'-3149'. Conv to WI 10/3/57 P&A 6/19/81, see attached sketch.
Burch AA Fed #34	K								
Burch BB Fed #1	N	3277'	Oil 8/27/41	10" 7-7/8"	8-5/8" 24# 7" 20#	523' 2730'	50sx 100sx	165'(C) 1321'(C)	O.H. 2730'-3277', perfs 2273'-2638'
**Burch BB Fed #6	M	3598' (3593')	Oil 4/29/42	10-3/4" 8" 6-1/4"	8-5/8" 28# 7" 20# 4-1/2"(L) 9.5#	366' ~~2385~~ 2773' 2737'-3599'	100sx 100sx 185sx	Circ.(C) 1163'(C) 2737'	Perfs 2798'-3558'
Burch BB Fed #13	N	3605'	Oil 2/6/47	11" 8-3/4" 6-1/4"	8-5/8" 24# 7" 20# 4-1/2"(L) 9.5#	456' 2942' 2906'-3605'	75sx 110sx 140sx	161'(C) 2210'(C) 2906'	Perfs 2504'-3570'
Burch C Fed #3	O	3246'	Oil 9/21/41	12-1/4"* 9-5/8"* 7-7/8"*	10-3/4" 42# 8-5/8" 24# 7" 20#	330' 560' 2710'	None (Pulled) 50sx 100sx	 274'(C) 1301'(C)	O.H. 2710'-3246', perfs 2540'-2624'
Burch C Fed #35	O	3450' (3444')	Oil 5/15/73	12-1/4" 7-7/8"	8-5/8" 20# 4-1/2" 9.5#	511' 3450'	100sx 300sx	269'(C) 2133'(C)	Perfs 2566'-3326'
Section 22, T-17-S R-29-E									
M. Dodd A #10-Y	A	3285'	WI 12/9/55	12-1/4"* 7-7/8"*	8-5/8" 24#* 5-1/2" 20#*	449' 3284'	450sx 250sx	Circ. (C) 1841' (C)	Perfs 3246-3262' & 2380-3186'. Conv. to WI 4/23/69

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
Section 23, T-17-S, R-29-E										
Burch BB Fed #8	H	3384' (3250')	Oil 3/26/43	10" 8-1/4" 6-1/4"	8-5/8" 7" 5 1/2"(L)	28# 24# 17#	440' 2564' 2516-3290'	50sx 100sx 35sx	82'(C) 1342'(C) 2835'(T.S.)	Perfs 2442'-3186'
**Burch BB Fed #19	A	3400'	Oil 2/20/71	12-1/4" 7-7/8"	8-5/8" 4-1/2"	20# 9.5#	394' 3400'	100sx 300sx	152'(C) 2083'(C)	Perfs 2463'-3169'
Burch BB Fed #20	B	3400'	Oil 3/28/71	12-1/4" 7-7/8"	8-5/8" 5 1/2"	20# 14#	379' 3400'	100sx 300sx	137'(C) 1668'(C)	Perfs 2407'-3351'
Burch BB Fed #27	A	3403'	Oil 8/13/74	11" 7-7/8"	8-5/8" 4-1/2"	20# 9.5#	408' 3399'	100sx 350sx	15'(C) 1863'(C)	Perfs 2450'-3356'
Burch BB Fed #28	B	3425'	Oil 11/16/74	12-1/4" 7-7/8"	8-5/8" 4-1/2"	20# 9.5#	410' 3425'	100sx 350sx	167'(C) 1889'(C)	Perfs 2400'-3369'
Burch BB Fed #29	H	3425'	Oil 11/7/74	12-1/4" 7-7/8"	8-5/8" 4-1/2"	20# 9.5#	414' 3425'	100sx 350sx	171'(C) 1889'(C)	Perfs 2468'-3185'
Burch C Fed #15	D	12260' (3345')	Oil 9/18/58	17-1/2"* 12-1/4" 8-3/4"	13-3/8" 9-5/8" 5-1/2"	48# 36# 15.5#	765' 2744' 3355'	463sx 1100sx 230sx	Circ. 610'(T.S.) 2444'(C)	Cmt. plugs 7216'-7281' (25 sx), 3413'-3518' (50 sx). Cal seal & hydromite 3329'-3413'. Perfs Perfs 2407'-3312'
**Burch C Fed #17	C	3356'	Oil 4/3/71	12-1/4" 7-7/8"	8-5/8" 4-1/2"	20# 9.5#	380' 3353'	100sx 300sx	137'(C) 1883'(C)	Perfs 2390'-3218'
Burch C Fed #25	F	3400'	Oil 5/15/72	12-1/4" 7-7/8"*	8-5/8" 4-1/2"	20# 9.5#	375' 3400'	100sx 500sx	132'(C) 1205'(C)	Perfs 2390'-3357'

RE2.1/grayburg3

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
Burch C Fed #36	E	3549'	Oil 5/18/73	12-1/4" 7-7/8"	8-5/8" 4-1/2"	20# 9.5#	359' 3549'	100sx 535sx	116'(C) 1390'(B.L.)	Perfs 2419'-3484'
Burch C Fed #40	D	3525'	Oil 9/26/77	12-1/4" 7-7/8"	8-5/8" 5-1/2"	20# 15.5#	396' 3525'	200sx 400sx	Circ.(C) 1216'(C)	Perfs 2372'-3464'
Burch C Fed #44	I	3300' (3279')	Oil 12/3/81	12-1/4" 7-7/8"	8-5/8" 5-1/2"	36# 15.5#	385' 3300'	240sx 2250sx	Circ. 845'(A.L.)	DV tool @ 2051', perfs 2393'-3087'
G.K. Unit Tr. BB #5	K	3325'	Oil 6/28/42	10"* 8"* 6-1/4"*	8-5/8" 7" 5-1/2"	24# 20# 14#	400' 2565' 3267'	100sx 100sx 35sx	Circ.(C) 1343'(C) 2538'(C)	O.H. 3267'-3325', cut & pulled 5 1/2" csg. @ 2565'
G.K. Unit Tr. BB #7	G	3360'	WI 9/15/42	10" 8" 6-1/4"	8-5/8" 7" 5-1/2"(L)	24# 20# 14#	420' 2557' 2505-3265'	100sx 100sx 35sx	Circ. (C) 1335' (C) 2807'(T.S.)	O.H. 3265'-3360', conv. to WI 4/15/66.
G.K. Unit Tr. BC #1	E	3319'	WI 3/28/38	10" 8" 6-1/4"	8-5/8" 7" 5-1/2"	32# 20# 14#	362' 2597' 3237'	50sx 75sx 35sx	4'(C) 1680'(C) 2541'(C)	O.H. 3237'-3319', cut & pulled 5 1/2" csg. @ 2541'. Conv to WI 4/4/66.
G.K. Unit Tr. BC #2	F	3337'	WI 9/18/38	10" 8" 6-1/4"	8-5/8" 7" 5-1/2"(L)	28# 24# 14#	380' 2606' 2553-3246'	50sx 100sx 35sx	22'(C) 1384'(C) 2783'(T.S.)	O.H. 3246'-3337', conv. to WI 4/12/66.
G.K. Unit Tr. BC #6	O	3326'	Oil 2/10/43	10" 8" 6-1/4"	8-5/8" 7" 5-1/2"	28# 20# 14#	366' 2385' 3255'	90sx 100sx 35sx	Circ.(C) 1163'(C) 2527'(C)	O.H. 3255'-3326', cut & pulled 5 1/2" @ 2339'

RE2.1/grayburg4

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.	Casing Depth	Cmt	TOC	Remarks
G.K. Unit Tr. BC #7	I	3358'	WI 4/25/43	10" 8" 6-1/4"	8-5/8" 24# 7" 24# 5-1/2"(L) 14#	384' 2459' 2408-3282'	75sx 100sx 35sx	Circ.(C) 1237'(C) 2750'(T.S.)	O.H. 3281'-3358', conv. to WI 4/4/66.
G.K. Unit Tr. BC #8	P	3493' (3374')	WI 4/26/49	10"* 8"* 6-1/4"*	8-5/8" 28# 7" 24# 5-1/2"(L) 17#	390' 2509' 2445-3291'	75sx 100sx 35sx	Circ.(C) 1287' 2860'(T.S.)	O.H. 3291'-3374'
G.K. Unit Tr. BC #10	P	3347'	Oil 5/26/49	10" 8" 6-1/4"	8-5/8" 24# 7" 20# 5-1/2"(L) 15.5#	392' 2674' 2612-3280'	50sx 100sx 35sx	34'(C) 1452'(C) 2660'(T.S.)	O.H. 3280'-3347'
G.K. Unit Tr. BC #14	O	3345'	Oil 6/4/50	10"* 8"* 6-1/4"*	8-5/8" 28# 7" 20# 5-1/2"(L) 17#	407' 2721' 2668-3267'	125sx 100sx 35sx	Circ.(C) 1499'(C) 2860'(T.S.)	O.H. 3267'-3345'
G.K. Unit Tr. BC #37	J	3575' (3569')	Oil 12/13/75	12-1/4" 7-7/8"	8-5/8" 24# 5-1/2" 14#	413' 3575'	100sx 350sx	171'(C) 1555'(C)	Perfs 3362'-3448'
G.K. Unit Tr. BC #38	I	3552' (3546')	Oil 2/8/76	12-1/4" 7-7/8"	8-5/8" 24# 5-1/2" 14#	375' 3552'	100sx 350sx	133'(C) 1532'(C)	Perfs 3356'-3366'
Section 24, T-17-S, R-29-E									
Dexter Fed #1	F	3533' (3526')	Oil 1/26/44	12-1/4"* 7-7/8"* 6-1/4"*	8-5/8" 24# 7" 20# 4-1/2" (L)9.5#	444' 2791' 2760'-3535'	50sx 100sx 125sx	123'(C) 1382'(C) 2760'	Perfs 2350' - 3378'
Dexter Fed #2	F	3425'	Oil 9/10/74	12-1/4" 7-7/8"	8-5/8" 20# 4-1/2" 9.5#	395' 3425'	100sx 400sx	138'(C) 1669'(C)	Perfs 2480' - 3378'

RE2.1/grayburg5

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.	Casing Depth	Cmt	TOC	Remarks
Keely A Fed #2	H	3084'	Oil 12/5/29	12-1/4"*	10-3/4" 40#	248'	None	-	O.H. 2778' - 3084'
				9-1/2"*	8-5/8" 32#	936'	None	-	
				7-7/8"*	7" 24#	2778'	None	-	
Keely A Fed #3	A	3556'	Oil 6/14/72	12-1/4"	8-1/4" 32#	405'	50sx	293'(C)	Perfs 2951' - 3410'
				7-7/8"	7" 20#	2873'	100sx	1464'(C)	
				6-1/4"	4-1/2"(L) 9.5#	2625'-3555'	100sx	2625'(C)	
Keely A Fed #4	G	3588'	Oil 3/20/38	10"*	8" 32#	400'	50sx	145'(C)	O.H. 2794' - 3588'
				7-7/8"*	7" 24#	2794'	100sx	1385'(C)	
**Keely A Fed #5	I	3613'	Oil 11/16/72	12-1/4"	10-3/4" 40#	305'	None (Pulled)		
				10"	8-5/8" 24#	518'	50sx	172'(C)	O.H. 2727' - 3613',
				8-1/4"	7" 20#	2727'	100sx	1765'(C)	perfs 2479'-2525'
Keely A Fed #6	L	3544' (3538')	Oil 9/29/43	12-1/4"	8-5/8" 28#	428'	50sx	307'(C)	Perfs 2328'-3524'
				7-7/8"	7" 24#	2732'	100sx	1323'(C)	
				6-1/4"	4-1/2"(L) 9.5&11.6#	2720'-3544'	135sx	2720'(C)	
**Keely A Fed #7	K	3569'	Oil 9/29/43	10-3/4"*	8-5/8" 28#	430'	65sx	141'(C)	Perfs 2342'-3488'
				8-1/4"*	7" 20#	2738'	100sx	1776'(C)	
				6-1/4"*	4-1/2"(L) 9.5#	2703'-3569'	100sx	2703'	
Keely A Fed #8	J	3589'	Oil 2/29/72	10"*	8-5/8" 28#	418'	50sx	48'(C)	Perfs 2370'-3549'
				7-7/8"*	7" 20#	2752'	100sx	1343'(C)	
				6-1/2"	4-1/2"(L) 9.5#	2697'-3589'	125sx	2697'(C)	

RE2.1/grayburg6

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
**Keely A Fed #9	E	3527' (3521')	Oil 12/10/43	10-3/4"	8-5/8"	24#	416'	50sx	295'(C)	Perfs 2333'-3481'
				8-1/4"	7"	20#	2749'	100sx	1787'(C)	
				6-1/4"	4-1/2"(L)	9.5#	2719'-3527'	135sx	2719'(C)	
Keely A Fed #10	B	6866' (3620')	Oil 7/7/47	17-1/2"*	16"	61#	235'	None		Perfs 2458'-3218', sqzd
				15"	11-3/4"	47#	952'	400sx	170'(C)	w/1425sx from 1740' to
				11"	7"	?	3620'	700sx	1837'(C)	surface to shut off water-flow, 5/1/84
Keely A Fed #11	I	3618' (3612')	Oil 4/21/72	12-1/4"	8-5/8"	24#	450'	50sx	327'(C)	Perfs 2403'-3590'
				7-7/8"	7"	20#	2865'	100sx	1456'(C)	
				6-1/4"	4-1/2"(L)	9.5#	2808'-3618'	130sx	2808'	
**Keely A Fed #15	G	3519' (3509')	Oil 5/9/72	10-3/4"	8-5/8"	24#	450'	75sx	109'(C)	Perfs 2376'-3468'
				8-1/4"	7"	20#	2796'	100sx	1834'(C)	
				6-1/4"	4-1/2"(L)	9.5#	2746'-3515'	150sx	2746'	
Keely A Fed #16	C	3125' (3076')	Oil 1/21/72	11"	8-5/8"	20&24#	386'	100sx	Circ.	Perfs 2896'-3073'
				7-7/8"	5-1/2"	14&15.5#	3125'	225sx	1826'(C)	
Keely A Fed #19	D	3250'	Oil 4/1/71	12-1/4"	8-5/8"	20#	403'	100sx	161'(C)	Perfs 2436'-3206'
				7-7/8"	5-1/2"	14#	3250'	300sx	1518'(C)	
Keely A Fed #23	A	3550' (3194')	Oil 1/20/75	12-1/4"	8-5/8"	23&24#	440'	100sx	198'(C)	Perfs 2523'-3076'
				7-7/8"	4-1/2"	9.5#	3200'	350sx	1664'(C)	
Keely A Fed #25	L	3550' (3544')	Oil 12/3/75	12-1/4"	8-5/8"	24#	403'	100sx	161'(C)	Perfs 2340'-3510'
				7-7/8"	4-1/2"	9.5&10.5#	3550'	400sx	1794'(C)	
Keely A Fed #26	L	3575' (3569')	Oil 12/21/75	12-1/4"	8-5/8"	24#	386'	100sx	144'(C)	Perfs 2330'-3506'
				7-7/8"	4-1/2"	9.5&11.6#	3575'	400sx	1819'(C)	

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
Keely B Fed #2	N	3593' (3589')	Oil 5/21/43	10-3/4"*	8-5/8"	24#	385'	50sx	162'(C)	Perfs 2372'-3529'
				8-1/4"*	7"	20#	2715'	100sx	1753'(C)	
				6-1/4"	4-1/2"(L)	9.5#	2663'-3589'	135sx	2663'	
Keely B Fed #3	M	2937'	Oil 9/7/43	10-3/4"*	8-1/4"	28#	406'	50sx	183'(C)	O.H. 2705'-2937'
				8"*	7"	24#	2705'	100sx	1483'(C)	
**Keely B Fed #24	N	13341' (3550')	Oil 2/1/53	15-1/2"	13-3/8"	61#	324'	650sx	Circ (C)	Perfs 9100'-9200'. 40sx cmt 11100'-11150'. 4 sx calseal 9500'-9530'. Cut & pulled 7" @ 3722'. 75 sx cmt 3550'-3702'. Perfs 2342'-3393'. O.H. 3452'-3550'.
				12-1/4"	9-5/8"	36#	3452'	2350sx	Circ (C)	
				8-3/4"	7"	23,26 & 29#	11148'	515sx	6495'(T.S.)	
Keely B Fed #26	N	3575'	Oil 11/22/74	12-1/4"	8-5/8"	20#	392'	100sx	150'(C)	Perfs 2936'-3471'
				7-7/8"	4-1/2"	9.5#	3575'	725sx	392'(C)	
Keely C Fed #4	P	3628' (3622')	Oil 11/11/42	12-1/4"	10-3/4"	40#	240'	None(Pulled)		Perfs 2437'-3535'
				10-3/4"	8-5/8"	24#	433'	50sx	203'(C)	
				8-1/4"	7"	20#	2745'	100sx	1783'(C)	
				6-1/4"	4-1/2"(L)	9.5#	2660'-3628'	150sx	2660'	
**Keely C Fed #5	O	3564' (3558')	Oil 3/11/43	10-3/4"	8-5/8"	28#	434'	75sx	100'(C)	Perfs 2400'-3478'
				8-1/4"	7"	20#	2741'	100sx	1779'(C)	
				6-1/4"	4-1/2"(L)	9.5#	2633'-3564'	150sx	2633'	
Section 25, T-17-S, R-29-E										
Grayburg Deep Unit #5	A	7225' (6828')	SI 7/27/60	12-1/4"	None		905'			
				11"	8-5/8"	28#	1404'	525sx	102'(C)	DV tool @ 2857'. Circ. 1st stage (275sx on 2nd stage) perfs 6655'-6679.
				7-7/8"	5-1/2"	17#	6838'	650sx	1270'(C)	

RE2.1/grayburg8

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
Keely B Fed #5	D	3520'	Oil 2/15/44	10-3/4" 8-1/4" 6-1/4"*	8-5/8" 7" 4-1/2"(L)	24# 20# 9.5#	400' 2819' 2800'-3583'	50sx 100sx 175sx	177'(C) 1857'(C) 2800'(C)	Perfs 2400'-3443'
**Keely B Fed #6	C	3158' (2767')	Oil 1/1/44	10-3/4"* 8-1/4"*	8-5/8" 7"	23# 20#	420' 2819'	50sx 100sx	197'(C) 1857'(C)	O.H. 2819'-3158', Conv. to WI 4/25/69, SI 10/5/73 O.H. abandoned w/CIBP @ 2767'. Conv. to oil producer 1/3/83, perfs 2426'-2583'
Keely B Fed #14	C	3582'	Oil 2/2/49	10-3/4" 8-1/4" 6-1/4"	8-5/8" 7" 4-1/2"(L)	24# 20&24# 9.5#	380' 2782' 2763'-3582'	75sx 100sx 160sx	46'(C) 1820'(C) 2763'(C)	Perfs 2380'-3466'
Keely B Fed #18	D	3434' (3391')	Oil 2/9/51	12-1/4" 8-1/4"* 6-1/4"*	8-5/8" 7" 4-1/2"	24# 20# 12.75#	403' 2770' 3406'	75sx 100sx 150sx	221'(C) 1808'(C) 1944'(C)	Perfs 2452'-3370'
Keely B Fed #20	C	3202'	Oil 12/22/50	10"* 7-7/8"*	8-5/8" 7"	28# 20#	458' 2900'	50sx 100sx	100'(C) 1491'(C)	O.H. 2900'-3202', perfs 2470'-2868'
Keely C Fed #7	B	3610'	Oil 8/1/72	10" 7-7/8" 6-1/4"	8-5/8" 7" 4-1/2"(L)	28# 20# 9.5#	468' 2817' 2680'-3610'	50sx 100sx 165sx	110'(C) 1408'(C) 2680'	Perfs 2468' - 3560'
**Keely C Fed #8	A	3605'	Oil 8/12/43	10"* 7-7/8"* 6-1/4"	8-5/8" 7" 4-1/2"(L)	24# 20# 9.5#	459' 2848' 2815'-3605'	50sx 100sx 125sx	101'(C) 1439'(C) 2815'	Perfs 2486' - 3565'

RE2.1/grayburg8a

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
**Keely C Fed #10	E	3165' (2951')	Oil 2/14/45	10" 8-1/4"	8-5/8" 7"	24# 20#	430' 3001'	50sx 100sx	210'(C) 2039'(C)	Squeezed hole @187' w/ 100sx Conv. to WI 4/25/69. CIBP@ 2951' w/4sx cmt. Conv. to oil 12/6/82. Perfs 2480'-2600'
Keely C Fed #11	F	3185'	Oil 11/12/44	12-1/2" 10" 7-7/8"	None 8-5/8" 7"	24# 20#	250' 450' 3000'	100sx 100sx	75(C) 1075'(T.S.)	Squeezed w/ 100 sx @1885', 2/79. Perfs 1558'-2608', O.H. 3000'-3185
**Keely C Fed #12	G	3275'	Oil 5/22/44	10" 8"	8-5/8" 7"	24# 20#	460' 2860'	50sx 100sx	102'(C) 1638'(C)	O.H. 2860'-3275'. Conv to GI 12/45 SI 4/47. Perfs 2628'-2643'. Conv to WI 4/24/69.
Keely C Fed #13	H	3242'	Oil 7/8/44	10"* 7-7/8"*	8-5/8" 7"	24# 20#	482' 2912'	50sx 100sx	124'(C) 1770'(B.L.)	O.H. 2912'-3242', perfs 2546' -2718'
Keely C Fed #17	L	3210'	Oil 4/19/45	12"* 9-5/8"* 7-7/8"*	10" 8-5/8" 7"	24# 20#	304' 436' 2994'	None 50sx 150sx	207'(C) 881'(C)	O.H. 2994'-3210', perfs (proposed 2456'-2911')
**Keely C Fed #18	K	3262' (2870')	Oil 9/6/44	12" 10" 8-1/4"	10-3/4" 8-5/8" 7"	42# 24# 20#	260' 474 2921'	None (pulled) 150sx 100sx	Circ.(C) 1959'(C)	O.H. 2921'-3262'. Conv. to WI 11/24/65 SI 10/73 CIBP @ 2870'
Keely C Fed #19	J	3275'	Oil 3/12/45	10"* 7-7/8"*	8-5/8" 7"	24# 20#	480' 3100'	50sx 100sx	122'(C) 1691'(C)	O.H. 3100'-3275', perfs (proposed) ± 2350' - 2800'
**Keely C Fed #20	I	3330' (3070')	Oil 3/31/47	12-1/2" 10" 7-7/8"*	None 8-5/8" 7"	24# 20#	325' 523' 3119'	100sx 100sx	163'(C) 1710'(C)	O.H. 3119'-3330'. Conv. to WI 4/24/69. SI 10/73. CIBP @ 3070'
**Keely C Fed #23	M	3227'	Oil 8/9/45	10"* 7-7/8"*	8-5/8" 7"	24# 20#	430' 3055'	50sx 100sx	72'(C) 1690'(B.L.)	O.H. 3055'-3227', perfs 2536'-2673'

RE2.1/grayburg8b

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
Keely C Fed #24	N	3235'	Oil 1/15/46	10"* 7-7/8"*	8-5/8" 7"	24# 20#	497' 3204'	50sx 100sx	139'(C) 1795'(C)	O.H. 3204'-3235', perfs (proposed) 2350'-3200'
**Keely C Fed #25	O	3428' (3120')	Oil 6/3/47	12" 10" 7-7/8"	10-3/4" 8-5/8" 7"	40# 24# 20#	225' 514' 3167'	None (pulled) 50sx 125sx	 199'(C) 1406'(C)	O.H. 3167'-3270'. Conv to WI 1/16/83, SI 11/70. Abandon w/CIBP @ 3120' w/4sx cmt 6/8/82. Perfs 2611'-2786' 6/8/82.
Keely C Fed #28	A	3143'	Oil 9/23/49	11" 8-1/4" 6-1/4"	8-5/8" 7" 4-1/2"(L)	28# 20# 9.5#	455' 2892' 2837'-3602'	60sx 100sx 120sx	219'(C) 1930'(C) 2837'	Perfs 2508'-3567'
Keely C Fed #30	H	3240'	Oil 2/11/50	11"* 8-1/4"*	8-5/8" 7"	24# 23#	465' 2951'	50sx 100sx	268'(C) 1989'(C)	O.H. 2951'-3240'
Keely C Fed #32	K	3235'	Oil 10/13/49	11"* 8-3/4" 6-1/4"	8-5/8" 7"	28# 23#	433' 2943'	75sx 100sx	138'(C) 2278'(C)	O.H. 2943'-3235'
Keely C Fed #33	J	3284'	Oil 9/12/50	11"* 7-7/8"*	8-5/8" 7"	28# 20#	472' 2983'	75sx 100sx	177'(C) 1574'(C)	O.H. 2983'-3284', perfs 2582' -2594'
Keely C Fed #34	I	3282'	Oil 10/21/54	11"* 7-7/8"*	8-5/8" 7"	24&28# 20#	486' 3048'	75sx 100sx	191'(C) 1639'(C)	O.H. 3048'-3282'
Keely C Fed #36	N	3265'	Oil 3/24/49	11"* 7-7/8"*	8-5/8" 7"	24# 20#	453' 3015'	75sx 120sx	156'(C) 1325'(C)	O.H. 3015'-3265', perfs 2523' -2974'
Keely C Fed #37	O	3228' (3018')	Oil 8/29/50	11"* 7-7/8"*	8-5/8" 7"	28# 20#	485' 3066'	50sx 100sx	288'(C) 1760'(B.L.)	O.H. 3066'-3018', Conv. to WI 1/13/65. Abandon w/CIBP @ 3019 w/4sx cmt, 6/7/82. Conv. to oil 12/10/82 perfs 2567'-2756'

RE2.1/grayburg8c

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
Keely C Fed #39	B	3556' (3550')	Oil 8/5/51	12-1/4"	8-5/8"	24#	399'	50sx	278'(C)	Perfs 2422'-3504'
				7-7/8"	7"	20#	2849'	100sx	1613'(A.L.)	
				6-1/4"	4-1/2"(L)	9.5#	2827'-3556'	135sx	2827'	
Keely C Fed #40	A	3238'	Oil 2/7/52	10"	8-5/8"	24#	485'	75sx	Circ.(C)	O.H. 2908'-3238', perfs 2447'-2656'
				8"	7"	20#	2908'	100sx	1686'(C)	Metal junk in hole.
Keely C Fed #42	F	3177'	Oil 11/10/50	10"	8-5/8"	24#	437'	75sx	Circ.(C)	Perfs 2450'-3354'
				7-7/8"	7"	20&24#	2525'	100sx	1116'(C)	
				6-1/4"	4-1/2"(L)	9.5#	2493'-3563'	214sx	2493'	
Keely C Fed #43	E	3192'	Oil 7/15/50	10-3/4"*	8-5/8"	24#	433'	75sx	99'(C)	O.H. 2915'-3192' CIBP @2700'
				8-1/4"*	7"	20#	2915'	100sx	1853'(C)	Hole in production csg.(Depth Unkn.)
Keely C Fed #54	I	3410'	Oil 9/11/78	12-1/4"	8-5/8"	20#	497'	335sx	Circ.(C)	Perfs 1650'-3336'
				7-7/8"	5-1/2"	15.5#	3407'	550sx	232'(C)	
Keely C Fed #58	P	3200' (3180')	Oil 9/15/84	12-1/4"	8-5/8"	24#	372'	350sx	Circ.	Perfs 2516'-3127'
				7-7/8"	4-1/2"	11.6#	3200'	690sx	Circ.	
Section 26, T-17-S, R-29-E										
G. K. Unit Tr. KB #1	B	3450'	Oil 4/30/43	10"*	8-5/8"	24#	400'	50sx	42'(C)	O.H. 3314'-3450'
				8"*	7"	20#	2509'	100sx	1287'(C)	
				6-1/4"*	5-1/2"(L)	17#	2441'-3314'	35sx	2915'(T.S.)	
G. K. Unit Tr. KB #4	A	3475'	WI 3/30/44	10"*	8-5/8"	24#	394'	50sx	36'(C)	O.H. 3347'-3475', Conv. to WI 1/28/66
				8"*	7"	20#	2772'	100sx	1550'(C)	
				6-1/4*	5-1/2"(L)	14,15.5 &17#	2702'-3347'	35sx	2935'(T.S)	

RE2.1/grayburg9

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
G.K. Unit Tr. KB #13	H	5076' (3537')	WI 8/28/47	12-1/4"*	10-3/4"	35#	915'	300sx	Circ.(C)	O.H. 2820'-3020' & 3420'-3537'
				9-1/2"*	7"	20#	2820'	200sx	1931'(C)	Backed off 7"@3020', recmt'd
				9-1/2"*	7"	20#	3020'- 3420'	125sx	3350'(T.S.)	@ 2820' Conv. to WI 3/1/63
G.K. Unit Tr. KC #1	D	3325'	Oil 9/12/37	10"*	8-5/8"	28#	320'	50sx	Circ.(C)	O.H. 3252'-3325'
				8"*	7"	20#	2685'	100sx	1463'(C)	
				6-1/4"*	5-1/2"(L)	15.5#	2628'-3252'	35sx	2840'(T.S.)	
G.K. Unit Tr. KC #6	C	3345'	Oil 2/27/43	10"	8-5/8"	28#	359'	50sx	1'(C)	O.H. 3291'-3345', cut & pulled
				8"	7"	24#	2452'	100sx	1230'(C)	5-1/2" csg. @ 2405'
				6-1/4"	5-1/2"	14#	3291'	35sx	2563'(C)	
G.K. Unit Tr. KC #9	F	3426'	WI 6/10/45	10"	8-5/8"	24#	369'	50sx	11'(C)	O.H. 3337'-3426' Conv to WI
				8"	7"	20#	2784	100sx	1562'(C)	4/7/66.
				6-1/4"	5-1/2"(L)	14#	2371'-3337'	35sx	2731'(C)	
G.K. Unit Tr. KC #14	E	3430' (3368')	WI 9/25/46	10"*	8-5/8"	24#	372'	75sx	Circ.(C)	O.H. 3112'-3368', perfs 2825'
				8"*	7"	20#	2737'	200sx	292'(C)	-2870' Conv. to WI 4/21/66
				6-1/4"*	5-1/2"(L)	14#	2678'-3112'	41sx	2678'(C)	
G.K. Unit Tr. KC #27	D	3407' (3320')	Oil 3/22/48	10"*	8-5/8"	24#	340'	50sx	Circ.(C)	O.H. 2675'-3320'
				8"*	7"	20#	2675'	100sx	1453'(C)	
G.K. Unit Tr. KC #29	F	3361'	Oil 12/12/50	10"*	8-5/8"	28#	391'	75sx	Circ.(C)	O.H. 3283'-3361'
				8"*	7"	20#	2725'	100sx	1483'(C)	
				6-1/4"*	5-1/2"(L)	17#	2649-3283'	35sx	2850'(T.S.)	
G.K. Unit Tr. KC #41	F	3385'	Oil 10/17/50	10"	8-5/8"	28#	371'	160sx	Circ.(C)	O.H. 3311'-3385'
				8-1/4"	7"	20#	2721'	100sx	1759'(C)	
				6-1/4"	5-1/2"(L)	17#	2655'-3311'	35sx	2880'(T.S.)	

RE2.1/grayburg10

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
**Keely B Fed #7	G	2987'	Oil 2/21/45	10"* 8-1/4"*	8-5/8" 7"	24# 20#	414' 2823'	50sx 100sx	56'(C) 1870'(C)	O.H. 2823'-2987', perfs 2478 -2492'
Keely B Fed #8	H	3542'	Oil 7/31/44	10-3/4" 8-1/4"* 6-1/4	8-5/8" 7" 4-1/2"(L)	24# 20# 9.5#	416' 2800' 2776'- 3542'	150sx 100sx 145sx	Circ.(C) 1838'(C) 2776'(C)	Perfs 2403'-3488'
Keely B Fed #9	J	3103'	P & A 9/26/44	10"* 8-1/4"*	8-5/8" 7"	24# 20#	411' 2930'	50sx 150sx	53'(C) 1487'(C)	P&A, see attached sketch
**Keely B Fed #10	I	3166' (2930')	Oil 11/27/44	10"* 8-1/4"*	8-5/8" 7"	24# 20#	415' 2980'	100sx 100sx	Circ.(C) 2018'(C)	O.H. 2980-3166', Conv to WI 4/25/69 CIBP @2930' w/4sx cmt. sqz'd w/100sx @ 1417'. Conv. to 12/13/82. Perfs 2466'-2627'
**Keely B Fed #11	O	3126'	Oil 10/11/45	11" 7-7/8"	8-5/8" 7"	24# 20#	372' 2970'	50sx 100sx	175'(C) 1800'(B.L.)	O.H. 2970'-3126'. Perfs 2454'-2619'
Keely B Fed #12	P	3212'	Oil 10/11/45	12-1/4"* 9-5/8"* 7-7/8"*	10" 8-5/8" 7"		283' 430' 3034'	None 50sx 100sx	- 197'(C) 1625'(C)	O.H. 3034'-3212'
Keely B Fed #15	I	3096'	Oil 5/23/51	10"* 8-1/4"*	8-5/8" 7"	24# 20#	420' 2853'	75sx 100sx	Circ.(C) 1891'(C)	O.H. 2853'-3096'
Keely B Fed #16	P	3185'	Oil 10/23/48	12-1/4"* 9-1/2"* 8-1/4"*	10" 8-5/8" 7"	32# 24# 20#	200' 428' 2935'	None(pulled) 75sx 100sx	 67'(C) 1973'(C)	O.H. 2935'-3185', perfs 2584' -2596'
Keely B Fed #19	H	3545'	Oil 5/20/50	12-1/4" 7-7/8" 6-1/4"	8-5/8" 7" 4-1/2"(L)	24# 20# 9.5#	377' 2821' 2739'-3545'	50sx 100sx 150sx	256'(C) 1412'(C) 2739'(C)	Perfs 2395'-3468'

RE2.1/grayburg11

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
Keely B Fed #21	J	2938'	Oil 3/30/50	12-1/4"* 10"* 8-1/4"*	10-3/4" 8-5/8" 7"	32#* 24# 20#	197' 402' 2801'	None(pulled) 75sx 100sx	 86'(C) 1839'(C)	O.H. 2801'-2938'
Keely B Fed #22	P	3247'	Oil 3/31/50	11"* 7-7/8"*	8-5/8" 7"	24# 20#	430' 2999'	75sx 100sx	135'(C) 1590'(C)	O.H. 2999'-3247'
Keely B Fed #23	G	6733' (3555')	Oil 9/7/78	11" 7-7/8"	8-5/8" 5-1/2"	24# 15.5#	1293' 4424'	400sx 500sx	Circ.(C) Circ.	Perfs 4253'-4329' abandonded w/CIBP @ 3555' & 3400'. Perfs 2374'-3270'
Keely B Fed #25	B	3450'	Oil 9/7/78	12-1/4" 7-7/8"	8-5/8" 4-1/2"	20# 9.5#	363' 3450'	100sx 450sx	121'(C) 1475'(C)	Perfs 2278'-3136'
Keely C Fed #15	L	3055'	Oil 9/25/46	11" 8"	8-5/8" 7"	24# 20#	402' 2807'	75sx 100sx	107'(C) 1585'(C)	O.H. 2807'-3055'
**Keely C Fed #16	K	3018'	Oil 7/9/46	10" 8-1/4"*	8-5/8" 7"	24# 24#	410' 2817'	100sx 100sx	69'(C) 1855'(C)	O.H. 2817'-3018', Perfs 2471'-2491'
**Keely C Fed #21	M	3367'	Oil 5/12/46	10-3/4" 8-1/4" 6-1/4"	8-5/8" 7" 4-1/2"(L)	24# 20# 9.5#	396' 2858' 2836'-3363'	250sx 100sx 115sx	Circ.(C) 1896'(C) 2836'	Perfs 2378'-3256'
Keely C Fed #22	N	3413'	Oil 7/13/46	11" 8" 6-1/4"	8-5/8" 7" 4-1/2"(L)	24# 20# 9.5#	415' 2876' 2869'-3414'	75sx 100sx 125sx	120'(C) 1654'(C) 2689'	Perfs 2412'-3376'
Keely C Fed #31	K	3280'	Oil 11/13/48	11"* 8"*	8-5/8" 7"	24# 20#	366' 2759'	75sx 100sx	71'(C) 1537'(C)	O.H. 2759'-3280'
Keely C Fed #35	N	3101'	Oil 12/23/53	10" 8-1/4"	8-5/8" 7"	24# 20&24#	387' 2832'	50sx 100sx	29'(C) 1870'(C)	O.H. 2382'-3101',

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
Keely C Fed #44	N	3106'	Oil 12/1/53	12-1/4"* 9-1/2"* 8"*	10-3/4" 8-5/8" 7"	40# 24# 20#	238' 399' 2692'	None(pulled) 150sx 100sx	 Circ.(C) 1730'(C)	O.H. 2692'-3106', perfs 2371'-2669'
Keely C Fed #53	F	3460'	Oil 9/7/78	12-1/4" 7-7/8"	8-5/8" 5-1/2"	20# 15.5#	333' 3460'	335sx 720sx	Circ. Circ.(C)	Perfs 2312'-3172'
Keely C Fed #57	E	3503' (3371')	Oil 5/8/84	12-1/4" 7-7/8"	8-5/8" 4-1/2"	24# 11.6#	325' 3503'	350sx 1300sx	Circ. Circ.	Waterflow @ 2100' shut off by cmt.perfs 2636'-3109'
Section 27, T-17-S, R-29-E										
Robinson Jackson Unit Tr. 1 #5	D	3020'	Oil 8/26/46	11"* 7-7/8"*	8-1/4" 7"	24# 20#	392' 2832'	50sx 100sx	219'(C) 1423'(C)	O.H. 2832'-3020'
Robinson Jackson Unit Tr. 1 #9	O	3014'	WI 5/5/47	11"* 7-7/8"*	8-1/4" 7"	24# 20#	368' 2829'	50sx 100sx	192'(C) 1420'(C)	O.H. 2829'-3014', perfs 2464'-2512'. Conv. to WI 8/31/73
Robinson Jackson Unit Tr. 1 #13	J	3000'	Oil 7/28/49	11"* 7-7/8"*	8-5/8" 7"	24# 20#	370' 2790'	50sx 100sx	173'(C) 1381'(C)	O.H. 2790'-3000', perfs 2437'-2455'
Robinson Jackson Unit Tr. 1 #14	P	3063'	SI Oil 9/27/49	12-1/2"* 9-5/8"* 7-7/8"*	10-3/4" 8-5/8" 7"	32# 24# 20#	175' 375' 2880'	None (pulled) 50sx 100sx	 102'(C) 1471'(C)	O.H. 2880'-3063'
Robinson Jackson Unit Tr. 2 #12	H	2902'	Oil 10/26/46	10"* 8-1/4"*	8-5/8" 7"	24#* 20#*	387' 2681'	50sx 100sx	29'(C) 1719'(C)	O.H. 2681'-2902'
Robinson Jackson Unit Tr. 2 #29	H	2920'	Oil 11/4/50	10"* 8"*	8-1/4" 7"	24#* 20#*	345' 2710'	50sx 100sx	58'(C) 1488'(C)	O.H. 2710'-2920'

RE2.1/grayburg13

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
Section 30, T-17-S, R-30-E										
Burch BB Fed #9	D	3240'	Oil 2/15/44	11"* 7-7/8"*	8-5/8" 7"	24# 20#	502' 2891'	50sx 100sx	305'(C) 1482'(C)	O.H. 2891'-3240' Conv. to GI 3/5/51. Conv to production 8/19/53
**Burch BB Fed #10	C	3246'	Oil 4/20/44	11"* 7-7/8"*	8-5/8" 7"	24# 20#	508' 2911'	50sx 100sx	311'(C) 1502'(C)	O.H. 2911'-3246', perfs 2572'-2690'
Burch BB Fed #11	E	3254'	Oil 6/7/44	11"* 7-7/8"*	8-5/8" 7"	24# 20#	523' 2925'	50sx 100sx	326'(C) 1516'(C)	O.H. 2925'-3254'
Burch BB Fed #12	F	3310'	Oil 7/9/45	11" 8-1/4"	8-5/8" 7"	24# 20#	522' 3195'	50sx 100sx	325'(C) 2233'(C)	O.H. 3195'-3310', perfs 2610'-2648'
Burch BB Fed #15	C	3263'	Oil 8/18/49	11"* 8-1/4"	8-5/8" 7"	24# 20#	506' 3013'	75sx 100sx	211'(C) 2051'(C)	O.H. 3013'-3263', perfs 2548'-2989'
Burch BB Fed #16	E	3316'	Oil 12/14/49	12-1/2" 8-1/4"*	8-5/8" 7"	24# 23#	513' 3161'	50sx 100sx	401'(C) 2199'(C)	O.H. 3161'-3316', perfs 2588'-2984'
Burch BB Fed #18	E	3255'	Oil 5/28/50	12-1/4"* 7-7/8"*	8-5/8" 7"	28# 20#	509' 2994'	50sx 100sx	388'(C) 1585'(C)	O.H. 2994'-3255', perfs 2526'-2668'
Burch BB Fed #32	F	3295'	Oil 3/1/76	12-1/4" 7-7/8"	8-5/8" 5-1/2"	20 & 24# 14#	504' 3295'	100sx 550sx	262'(C) 120'(C)	Perfs 1702'-3247'
Burch C Fed #9	B	3320'	Oil 5/31/44	11"* 7-7/8"*	8-5/8" 7"	24# 20#	535' 2680'	50sx 100sx	338'(C) 1271'(C)	O.H. 2680'-3320'
Burch C Fed #16	A	3355'	Oil 2/7/71	12-1/4" 7-7/8"	8-5/8" 5-1/2"	20,24&32# 14 & 15.5#	458' 3357'	100sx 225sx	216'(C) 2058'(C)	Perfs 2758'-3340'

RE2.1/grayburg14

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.		Casing Depth	Cmt	TOC	Remarks
Burch C Fed #18	G	3475'	Oil 4/17/71	12-1/4" 7-7/8"	8-5/8" 4-1/2"	20# 9.5#	515' 3475'	100sx 400sx	273'(C) 1719'(C)	Perfs 2732'-3446'
Burch C Fed #27	K	3388'	Oil 8/15/72	12-1/4" 7-7/8"*	8-5/8" 4-1/2"	20# 9.5#	512' 3445'	100sx 450sx	270'(C) 1470'(C)	Perfs 2702'-3331'
Burch C Fed #30	M	3445'	Oil 8/1/72	12-1/4" 7-7/8"*	8-5/8" 4-1/2"	20# 9.5#	494' 3388'	100sx 350sx	252'(C) 1851'(C)	Perfs 2703'-3374'
Burch C Fed #41	J	3390'	Oil 10/11/77	12-1/4" 7-7/8"	8-5/8" 5-1/2"	20# 15.5#	497' 3385'	125sx 550sx	194'(C) 210'(C)	Perfs 1737'-3304'
Grayburg Deep Unit #4	L	7953'	T.A. 5/20/60	12-1/4"	8-5/8"	28#	1450'	750sx	Circ.	O.H. 1450'-7953'
Grayburg Deep Unit #6	C	6900'	T.A. 3/2/70	11"	8-5/8"	24#	1436'	400sx		50sx 6350'-6500', 100sx 4545'-4900'
Section 34, T-17-S, R-29-E										
Robinson Jackson Unit Tr. 1A #1		No record	P&A							
Robinson Jackson Unit Tr. 1A #2	A	3110'	SI Oil 8/14/29	17-1/2"* 13-3/4"* 11"* 9-5/8"*	15-1/2" 12-1/2" 10" 8-1/4"	70# 50# 40# 32#	22' 241' 898' 2430'	None 25sx 25sx None	- 118' 218' -	O.H. 2430'-3110'
Robinson Jackson Unit Tr. 1A #12	A	3093'	WI 10/30/47	11"* 7-7/8"*	8-1/4" 7"	 20#	430' 2921'	50sx 100sx	254'(C) 1512'(C)	O.H. 2921'-3093'. Conv. to WI 8/31/73.

RE2.1/grayburg15

BURCH-KEELY WATERFLOOD

TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.	Casing Depth	Cmt	TOC	Remarks
Robinson Jackson Unit Tr. 1A #16	A	3175'	SI Oil 4/1/50	11"* 7-7/8"*	8-5/8" 28# 7" 23#	452' 2983'	50sx 100sx	255'(C) 1574'(C)	O.H. 2983'-3175'
Section 35, T-17-S, R-29-E									
Robinson Jackson Unit Tr. 1A #3	D	3140'	Oil 4/18/46	11"* 7-7/8"*	8-1/4" 7"	455' 2944'	50sx 100sx	282'(C) 1535'(C)	O.H. 2944'-3140'.
Robinson Jackson Unit Tr. 1A #11	E	3190'	WI 10/28/47	11"* 7-7/8"*	8-1/4" 7" 20#	450' 3034'	50sx 100sx	277'(C) 1625'(C)	O.H. 3034'-3190', perf 2458'-2668'. Conv. to WI 8/31/73.
Robinson Jackson Unit Tr. 2A #4	A	3191' (3184')	SI WI 7/27/45	11"* 7-7/8"*	8-5/8" 7" 20#	428' 3050'	50sx 100sx	231'(C) 1641'(C)	O.H. 3050'-3191', perf 2508'-2714'. Conv to WI 8/31/73
Robinson Jackson Unit Tr. 2A #5	B	3162'	Oil 9/29/45	11"* 7-7/8"*	8-5/8" 7"	431' 3058'	50sx 100sx	234'(C) 1599'(C)	O.H. 3055'-3162'
Robinson Jackson Unit Tr. 2A #6	G	3220'	WI 12/4/45	11"* 7-7/8"*	8-5/8" 7" 20#	465' 3055'	50sx 100sx	268'(C) 1646'(C)	O.H. 3055'-3220', perf 2506'-2712'. Conv to WI 8/31/73
Robinson Jackson Unit Tr. 2A #11	C	3135'	WI 10/13/46	11"* 7-7/8"*	8-5/8" 7" 20#	526' 2980'	50sx 100sx	329'(C) 1571'(C)	O.H. 2980'-3135', perf 2426'-2466'. Conv to WI 8/31/73
Robinson Jackson Unit Tr. 2A #23	C	3180'	Oil 4/24/50	11"* 7-7/8"*	8-5/8" 28# 7" 23#	505' 3010'	50sx 100sx	308'(C) 1601'(C)	O.H. 3010'-3180'
Robinson Jackson Unit Tr. 2A #24	A	3210'	Oil 5/28/50	11"* 7-7/8"*	8-5/8" 28# 7" 20#	492' 3049'	50sx 100sx	295'(C) 1640'(C)	O.H. 3049'-3210', perfs 2486'-2709'
Robinson Jackson Unit Tr. 2A #30	C	3188'	Oil 3/2/51	11"* 7-7/8"*	8-5/8" 28# 7" 20#	498' 3025'	100sx 100sx	105'(C) 1616'(C)	O.H. 3025'-3188', perfs 2438'-2656'

RE2.1/grayburg16

BURCH-KEELY WATERFLOOD

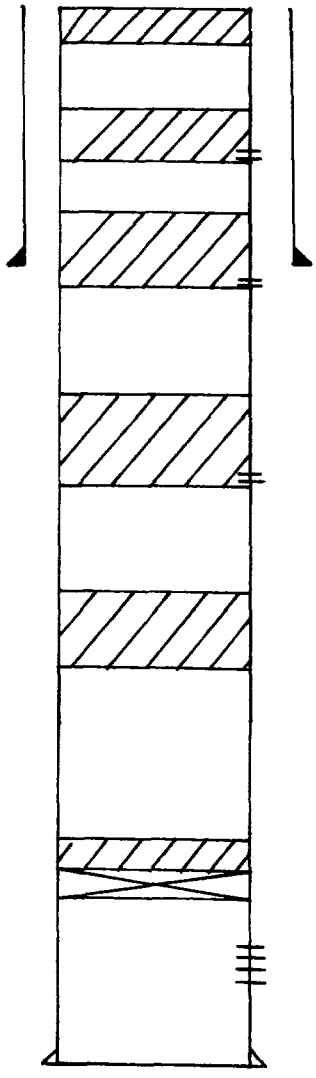
TABLE OF OFFSET WELLS

Lease/Well No.	Unit Letter	TD (PBTD)	Type & Date Drilled	Hole Size	Size & Wt.	Casing Depth	Cmt	TOC	Remarks
Section 36, T-17-S, R-29-E									
State A #6	E	3256'	Oil 1/15/46	10" 8-1/4"	8-1/4" 28# 7" 20#	483' 3092'	50sx 100sx	196'(C) 2130'(C)	O.H. 3092'-3256'
State B #2	C	3273' (3259')	SI Oil 10/30/45	12-1/4"* 7-7/8"*	8-5/8" 24# 7" 20#	490' 3150'	50sx 100sx	369'(C) 1741'(C)	O.H. 3150'-3273'
State B #3	A	3905' (3864')	Oil 3/25/84	12-1/4" 7-7/8"	8-5/8" 24# 4-1/2" 11.6#	356' 3905'	400sx 1985sx	Circ. Circ.	Perfs 2556'-3839' CIBP @ 3200'
State B 4458 #8	D	3255'	Oil 5/12/45	10" 8"	8-1/2" 24# 7" 20#	473' 3055'	50sx 150sx	143'(C) 1222'(C)	O.H. 3055'-3255'
State B 4458 #9	F	3296'	P&A 9/30/46	10" 8-1/4"	8-1/4" 28# 7" 20#	490' 3250'	50sx 150sx	203'(C) 1807'(C)	O.H. 3250'-3296'. P&A 2/84 See attached sketch.

RE2.1/grayburg17

* Estimate
**Proposed injection well

M. Dodd B #18
Plugged and Abandoned Well
Unit K, Section 14, T-17-S, R-29-E



10 sx @ surface

50 sx squeeze 150'-200', Circ.
to surface

8 5/8" OD @ 518', 12 1/4" hole
Cemented w/250sx, Cement Circ.
50 sx squeeze 320'-570', circ.
to surface

50 sx squeeze 600'-1000'

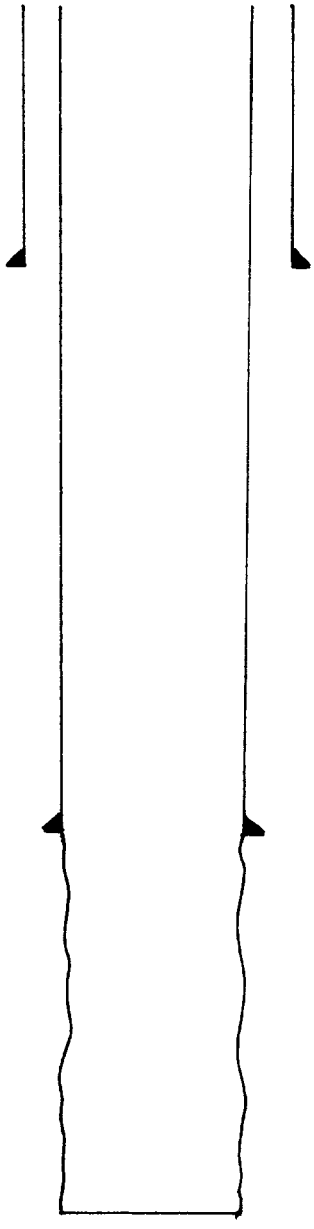
50 sx, 1529'-2170'

CIBP w/4sx cmt @ 2300'

2436'-2447'

4 1/2" OD @ 2700', 7 7/8"hole
Cemented w/250sx, TOC @ 1600'(B.L.)
TD @ 2700'

M. Dodd B #3
Plugged and Abandoned Well
Unit I, Section 14, T-17-S, R-30-E



10 3/4" OD @ 280', 17 1/2" & 11 3/4" hole
Cmt w/150sx, TOC @ 166'(c)

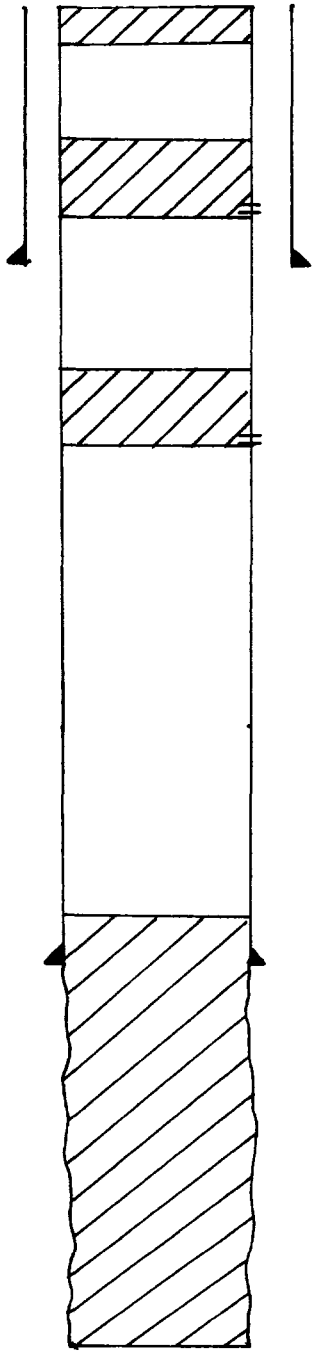
Well is P&A, but no data is on file w/NMOCD in Artesia, N.M.

7" OD @ 2292', 9 5/8" hole*
Cmt w/100sx, TOC @ 1872'(c)

TD @ 3029'

*Estimate

Burch AA Fed #23
Plugged and Abandoned Well
Unit E, Section 19, T-17-S, R-30-E



10 sx @ surface

293' 175 sx squeeze, circ. to surface

8 5/8" OD @ 455', 11" hole
Cmt w/75sx, TOC @ 160'(c)

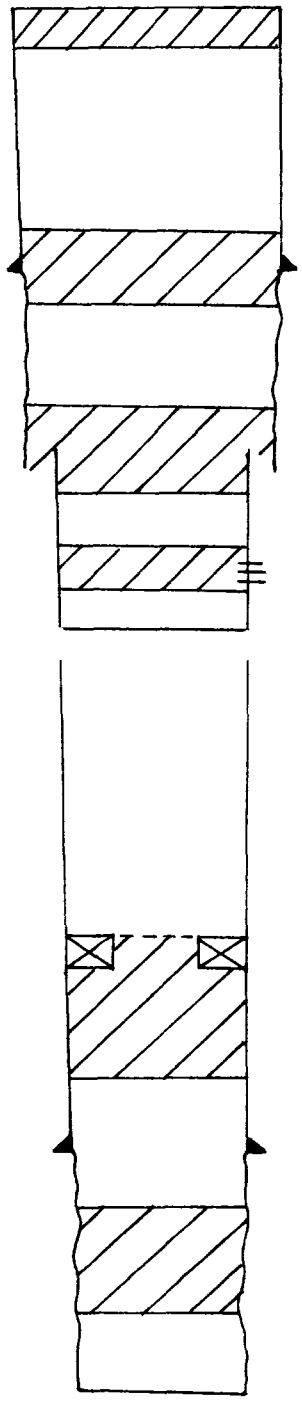
875', 55 sx squeeze 825'-875'

7" OD @ 2497', 7 7/8" hole
Cmt w/100sx, TOC @ 1088'(c)

125 sx, 2447'-3149'

TD @ 3149'

Keely B Fed #9
Plugged and Abandoned Well
Unit J, Section 26, T-17-S, R-29-E



10 sx @ surface

8 5/8" OD @ 411', 10" hole*
Cmt w/50sx, TOC @ 53'(c)
Cement plug 364'-464'

Backed off 7" @ 820'
Cement plug 720'-870'

1224'-1232'
25 sx across perfs
7" OD @ 1357', 7 7/8" hole
Cmt w/150sx, TOC @ Circ.(c)
Cut & pulled 7" @ 1364'

Halliburton EZSV Ret. @ 2000'
w/100sx cement

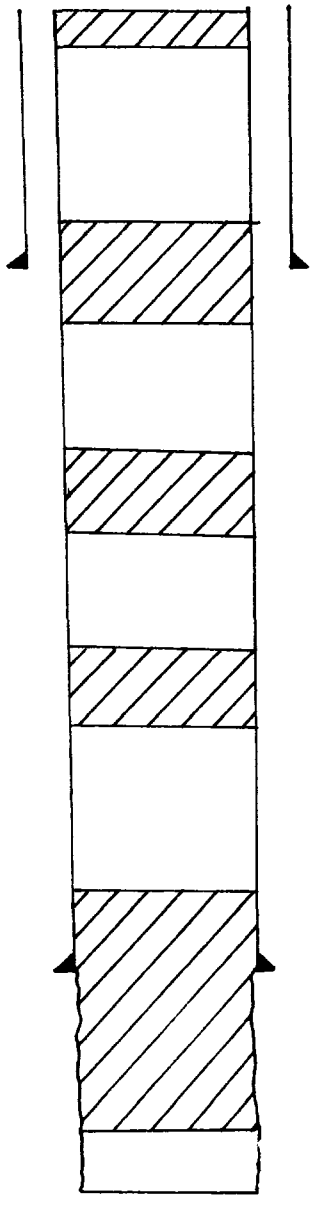
7" OD @ 2930', 7 7/8" hole
Cmt w/150 sx, TOC @ 1487'(c)

50 sx @ 3060'

TD @ 3103'

*Estimate

State B 4458 #9
Plugged and Abandoned Well
Unit F, Section 36, T-17-S, R-30-E



10 sx @ surface

50 sx pumped in bradenhead

8 1/4" OD @ 490', 10" hole
Cmt w/50sx, TOC @ 203'(c)
50 sx 385'-740'

50 sx @ 985'

50 sx @ 2180'

7" OD @ 3250', 8 1/4" hole
Cmt w/150sx, TOC @ 1807'(c)

50 sx @ 3290'

TD @ 3296'

VII. Proposed Operations

1. Injection Volume - Average: 6900 BWPD
   Maximum: 7500 BWPD

2. System: Closed

3. Injection Pressure - Average: 550 psi
   Maximum: 550 psi

4. Water Source: Produced water w/ fresh water make-up.
   (Analysis Attached)

5. N/A

VIII. Geological Data

A. Injection Zone

1. Lithology: Fine grained sandstone w/ dolomitic cement changing to dolomite w/ anhydritic veins.

2. Name: Grayburg/San Andres

3. Thickness: 1850'

4. Depth: 2150' - 4000'

B. Aquifer

1. Name: Ogalala

2. Depth: ± 300'

IX. Proposed Treatments

1. Acidize the Grayburg w/ ± 5000 gallons of 7-1/2" NeFe HCl and the San Andres w/ ± 7500 gallons of 15% NeFe HCl.

RE/grayburg1

COMPATABILITY TESTS

MALJAMAR FRESH & GRAYBURG JACKSON PRODUCED WATERS

ANALYSIS BY UNICHEM INTERNATIONAL, HOBBS, N.M.

Fresh Water (%)	100	86	75	50	25	14	0
Produced Water (%)	0	14	25	50	75	86	100
Specific Gravity	1.000	1.014	1.025	1.053	1.080	1.091	1.106
Total Dissolved Solids	212	22,312	39,633	79,050	119,563	134,929	157,864
pH	8.85	8.53	8.29	7.73	7.17	6.92	6.61
Cations							
Calcium (ppm)	20.0	372	649	1,279	1,908	2,185	2,538
Magnesium (ppm)	31.7	494	857	1,683	2,508	2,872	3,322
Sodium (ppm)	5.3	7,517	13,396	26,764	41,327	45,252	53,591
Anions							
Bicarbonate (ppm)	12.2	85.6	143	274	405	463	536
Carbonate (ppm)	12.0	10.3	9.0	6.0	3.0	1.6	0.0
Hydroxide (ppm)	0	0	0	0	0	0	0
Sulfates (ppm)	11	831	1,477	2,943	4,409	5,054	5,875
Chlorides (ppm)	120	13,000	23,100	46,100	69,000	79,100	92,000
Iron (ppm)	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Barium (ppm)	0.6	0.51	0.45	0.30	0.15	0.08	Not run
Ionic Strength (Molal)	6E-03	0.428	0.764	1.541	2.364	2.675	3.155
Carbonate Index @ 86 F	2.880	0.696	0.709	0.600	0.489	0.450	0.403
Calcium Carbonate Scaling?	Likely	Likely	Likely	Likely	Likely	Likely	Likely
Calcium Sulfate Index	-19.0	-44.0	-41.0	-35.0	-14.0	-0.83	13.7
Calcium Sulfate Scaling?	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Likely

Form 3A 5-83

FROM

PHILLIPS PETROLEUM COMPANY

NAME Natural Resources Group

ADDRESS Odessa Area, Exploration And Production

4001 Penbrook

Odessa, Texas 79762

Priority 1st Class	3rd or 4th Class	Express Mail	Insured Mail	Certified Mail	Registered Mail	Special Delivery	Freight or Express	Air Express	Air Freight	UPS

To LAND COMMISSIONER
STATE OF NEW MEXICO
BOX 1178
SANTA FE, NEW MEXICO 87501

CERTIFIED
931 389
MAIL

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4001 Penbrook

Odessa, Texas 79762

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To SOUTHLAND ROYALTY COMPANY

21 DESTA DRIVE

MIDLAND, TEXAS 79701

FIED
31 387

PHILLIPS PETROLEUM COMPANY

NAME Natural Resources Group

ADDRESS Odessa Area, Exploration And Production

4001 Penbrook

Odessa, Texas 79762

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To RAY WESTFALL

BOX 4

LOCO HILLS, NEW MEXICO 88255

CERTIFIED
P 503 931 388
MAIL

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4001 Penbrook
Odessa, Texas 79762

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To MARBOB ENERGY CORPORATION

BOX 304

ARTESIA, NEW MEXICO 88210

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4001 Penbrook
Odessa, Texas 79762

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To TENNECO OIL COMPANY

7990 I.H. 10 WEST

SAN ANTONIO, TEXAS 78230

NAME 4001 Penbrook

ADDRESS Odessa, Texas 79762

Priority 1st Class	3rd or 4th Class	Express Mail	Insured Mail	Certified Mail	Registered Mail	Special Delivery	Freight or Express	Air Express	Air Freight	UPS

To ANADARKO PRODUCTION COMPANY

BOX 2497

MIDLAND, TEXAS 79702

4001 PENBROOK
ODESSA, TEXAS 79762

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P 503 931 390
MAIL

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PHILLIPS 66

FROM
PHILLIPS OIL COMPANY
PHILLIPS PETROLEUM COMPANY
Natural Resources Group
NAME Odessa Area, Exploration And Production
ADDRESS 4001 Penbrook
Odessa, Texas 79762

Priority 1st Class	3rd or 4th Class	Express Mail	Insured Mail	Certified Mail	Registered Mail	Special Delivery	Freight or Express	Air Express	Air Freight	UPS

To BASSETT & BIRNEY OIL CORP.
207 SOUTH 4th ST., YATES BUILDING
ARTESIA, NEW MEXICO 88210

Form 3A 5-83

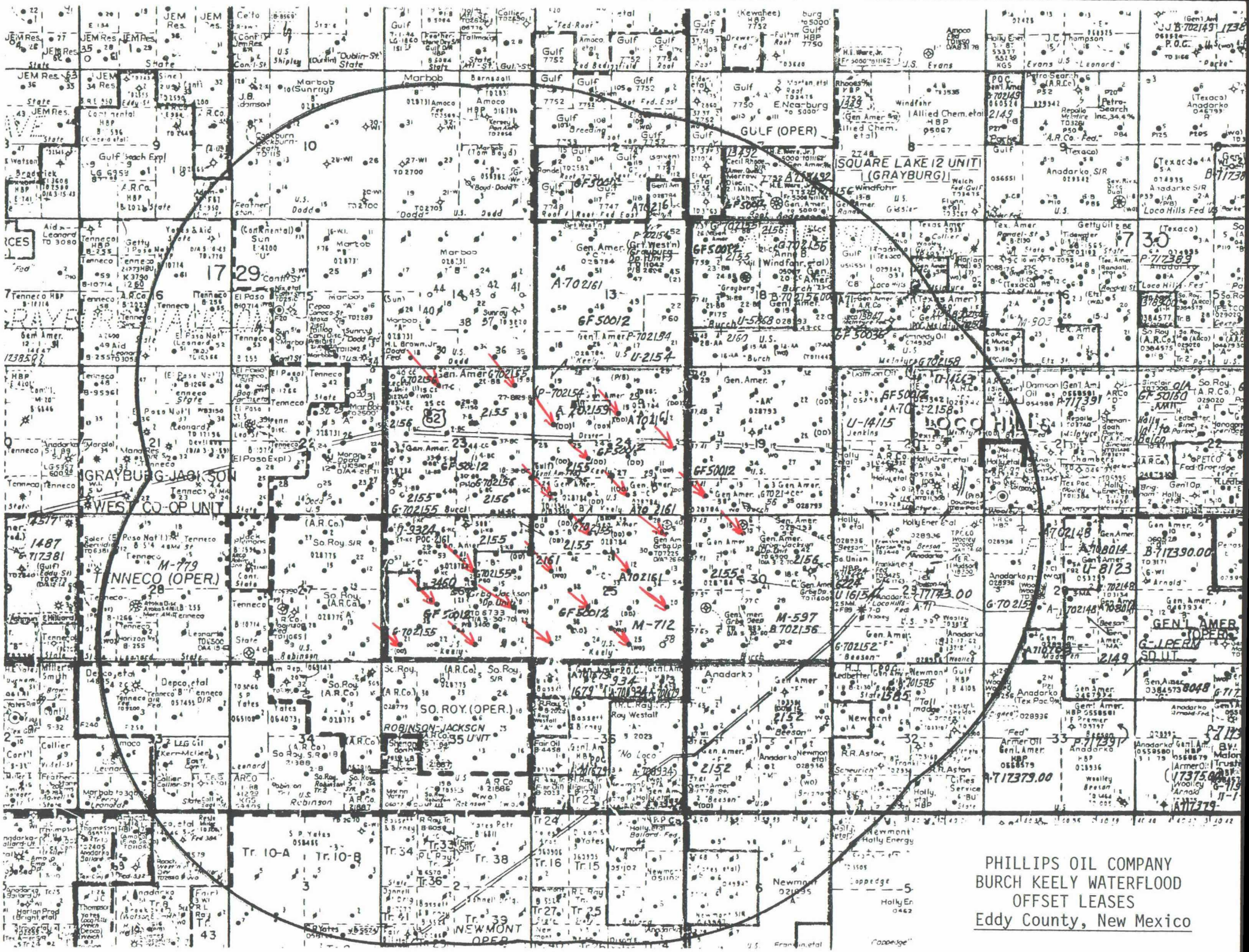
PHILLIPS 66

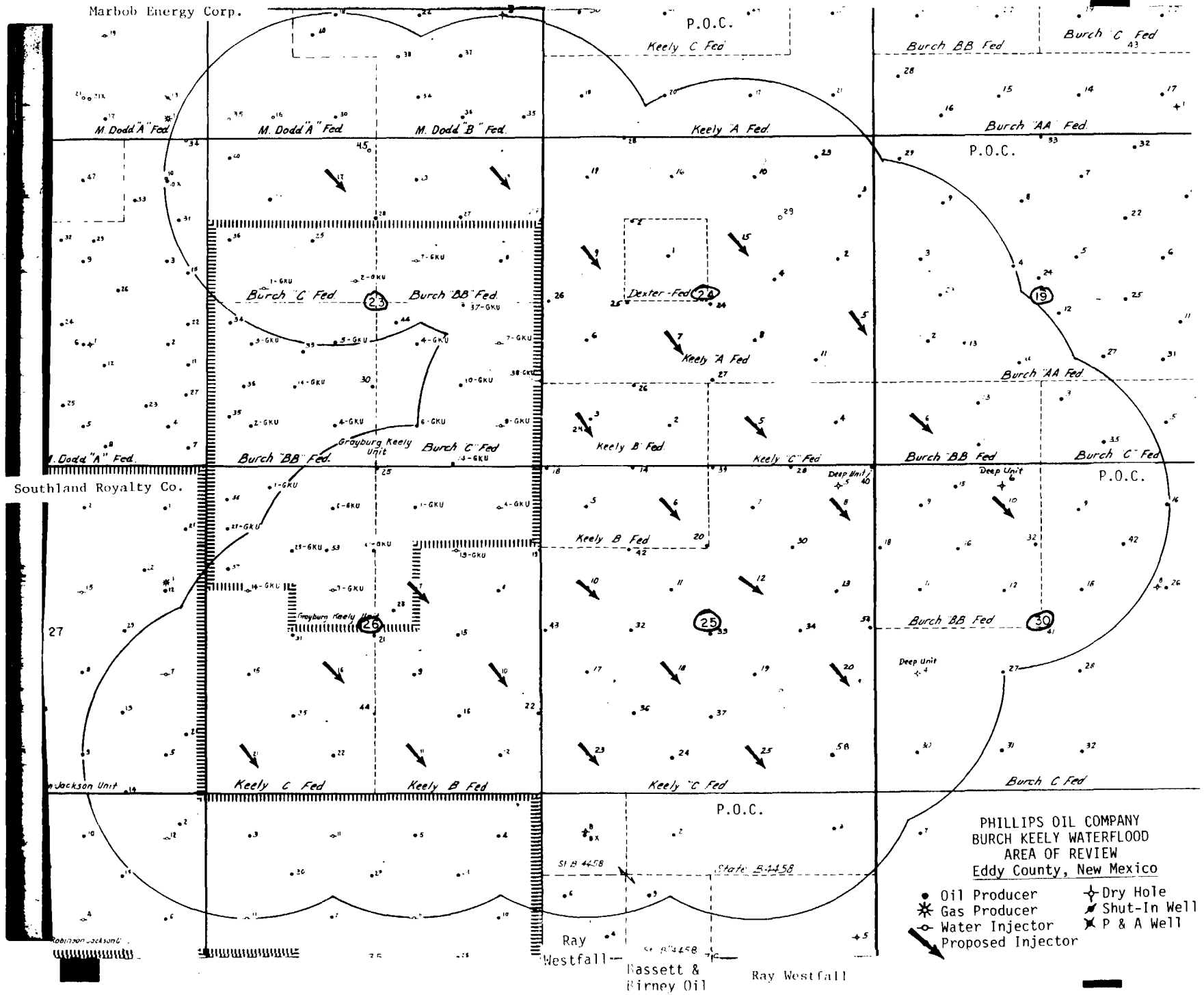
FROM
PHILLIPS OIL COMPANY
PHILLIPS PETROLEUM COMPANY
Natural Resources Group
NAME Odessa Area, Exploration And Production
ADDRESS 4001 Penbrook
Odessa, Texas 79762

Priority 1st Class	3rd or 4th Class	Express Mail	Insured Mail	Certified Mail	Registered Mail	Special Delivery	Freight or Express	Air Express	Air Freight	U
-										

CERTIFIED
P 503 931 391
MAIL

To BUREAU OF LAND MANAGEMENT
BOX 1778
CARLSBAD, NEW MEXICO 88220


PHILLIPS OIL COMPANY
BURCH KEELY WATERFLOOD
OFFSET LEASES
Eddy County, New Mexico


Marbob Energy Corp.
Southland Royalty Co.
P.O.C.
Keely C Fed
Burch BB Fed
Burch C Fed
M. Dodd "A" Fed
M. Dodd "A" Fed
M. Dodd "B" Fed.
Keely "A" Fed.
Burch "AA" Fed
P.O.C.
Burch "C" Fed
23
Burch "BB" Fed.
Dexter Fed
24
19
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Burch "AA" Fed
M. Dodd "A" Fed.
Burch "BB" Fed.
Grayburg Keely Unit
Burch "C" Fed
Keely B Fed
Keely "C" Fed
Burch "BB" Fed
Burch "C" Fed
Deep Unit
P.O.C.
Keely B Fed
20
25
26
Grayburg Keely Unit
Burch "BB" Fed
30
27
Deep Unit
Jackson Unit
Keely C Fed
Keely B Fed
Keely "C" Fed
Burch C Fed
P.O.C.
St B 4458
State B-4458
Ray Westfall
Bassett & Birney Oil
Ray Westfall
PHILLIPS OIL COMPANY
BURCH KEELY WATERFLOOD
AREA OF REVIEW
Eddy County, New Mexico
Oil Producer
Gas Producer
Water Injector
Proposed Injector
Dry Hole
Shut-In Well
P & A Well