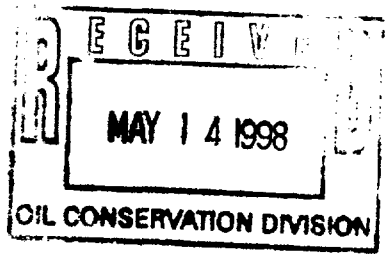
WFX 5/29/98
PMX 196

COASTAL MANAGEMENT CORPORATION
OIL AND GAS PROJECT MANAGEMENT

VIA FEDERAL EXPRESS
Tracking No. 802516448996

May 13, 1998



Mr. Ben Stone
State of New Mexico
Oil Conservation Division
2040 Pacheco Street
Santa Fe, New Mexico 87505

Re: Convert to Injection Application
Parkway Delaware Unit No.'s 205, 508, 509, 703, 704
Eddy County, New Mexico

Dear Mr. Stone:

Please find enclosed our application to convert the captioned wells to injection. Said wells were permitted to be drilled as injectors December 15, 1997 and were completed on various dates during the first quarter of 1998. You will note that the affidavit of publication has not been included in this package as I submitted that to the Carlsbad Current Argust on May 8th; however, a copy of same will be forwarded to you upon receipt.

I would like to thank you in advance for your ***immediate*** attention to this matter. Should you have any questions or require additional information, please feel free to contact the undersigned at 915-688-0756.

Sincerely,

COASTAL MANAGEMENT CORPORATION

Leila Esterly
Regulatory Coordinator

Enclosures
/le

Affidavit of Publication

№ 18405

State of New Mexico,
County of Eddy, ss.

Amy McKay

being first duly sworn, on oath says:

That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the state wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

May 14, 1998
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That the cost of publication is $ 41.98, and that payment thereof has been made and will be assessed as court costs.

Amy McKay

Subscribed and sworn to before me this

15th day of May, 1998

Donna Crump

My commission expires 8/1/98

Notary Public

May 14, 1998

NOTICE OF APPLICATION FOR FLUID INJECTION WELL PERMIT

Coastal Management Corporation (Operator for St. Mary Land & Exploration Company), P.O. Box 2726, Midland, Texas 79702, is applying to the State of New Mexico, Oil Conservation Division for a permit to inject fluid into a formation that is productive of oil and gas. The applicant proposes to inject fluid into the Delaware formation on the following five (5) wells which are all located in Section 35, Township 19 South, Range 29 East of the Parkway (Delaware) Field in Eddy County, New Mexico: Parkway Delaware Unit No. 205 located 1330' FNL & 180' FEL, Parkway Delaware Unit No. 508 located 1350' FSL &2520' FEL, Parkway Delaware Unit No. 509 located 1210' FSL & 1210', FEL, Parkway Delaware Unit No. 703 located 2610' FSL & 430' FEL, and the Parkway Delaware Unit No. 704 located 1450' FSL & 330' FEL. Fluid will be injected into the subsurface depth interval as follows: PDU No. 205 from 4260' - 4364', PDU No. 508 from 4160' - 4278', PDU No. 509 from 4204' 4324', PDU 703 from 4194' - 4319', and PDU No. 704 from 4219' -4344'. The expected maximum pressure on each well will be 2500 psi with an expected maximum injection volume of 600 BWPD.

Requests for a public hearing from persons who can show they are adversely affected, should be submitted in writing, within fifteen (15) days of publication, to the Oil Conservation Division of the State of New Mexico, 2040 S. Pacheco, Santa Fe, New Mexico 87505 (Telephone: 505-827-7131). Requests for further information concerning any aspect of the application should be directed to Leila Esterly at Coastal Management Corporation, P.O. Box 2726, Midland, Texas 79702-2726 (Telephone: 915-688-0700).

STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL
RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 Pacheco Street
Santa Fe, New Mexico 87505

FORM C-108
Revised 7/01/81

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: ____ Secondary Recovery __X__ Pressure Maintenance ____ Disposal ____ Storage
Application qualifies for administrative approval? ____ Yes ____ No

II. OPERATOR: St. Mary Land & Exploration Company, c/o Coastal Management Corporation

ADDRESS: P.O. Box 2726, Midland, Texas 79702-2726

CONTACT PARTY: Leila Esterly PHONE: 915-688-0756

III. WELL DATA: Complete the data required on the reverse side of this form for each well processed for injection. Additional sheets may be attached , if necessary.

IV. Is this an expansion of an existing project: __X__ Yes ____ No
If yes, give the Division order number authorizing the project R-9822

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well within 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 sources 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.)

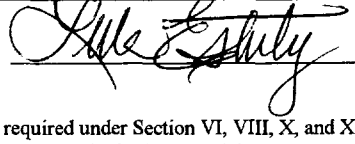
*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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 drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

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

NAME: Leila Esterly TITLE: Regulatory Coordinator

SIGNATURE:  DATE: May 8, 1998

* If the information required under Section VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal. June 26, 1993

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 objection or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87504-2088 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.

PARKWAY DELAWARE UNIT NO. 205
PARKWAY DELAWARE UNIT NO. 508
PARKWAY DELAWARE UNIT NO. 509
PARKWAY DELAWARE UNIT NO. 703
PARKWAY DELAWARE UNIT NO. 704

OFFSET OPERATORS AND INTERESTED PARTIES

OFFSET OPERATORS

Burlington Resources Oil & Gas
P.O. Box 51810
Midland, Texas 79710-1810

Presidio Exploration, Inc.
5613 DTC Parkway, Suite 750
P.O. Box 6525
Englewood, CO 80155-0625

Chevron U.S.A. Inc.
P.O. Box 36366
Houston, Texas 77236

Santa Fe Energy Resources, Inc.
1616 S. Voss, Suite 1000
Houston, Texas 77057

COUNTY CLERK

Eddy County Clerk
Attn: County Clerk
P.O. Box 850
Carlsbad, New Mexico 88221-0850

SURFACE OWNERS

Department of the Interior
Bureau of Land Management
2909 W. Second Street
Roswell, New Mexico 88201

Commissioner of Public Lands
State of New Mexico
P.O. Box 1148
Santa Fe, New Mexico 87504-1148

Reference XIV "Proof of Notice" of NMOC Form C-108 Instructions

I, Leila Esterly, certify that copies of the application were mailed on May 13, 1998 to the above affected parties at the addresses listed.

Leila Esterly, Regulatory Coordinator
for Coastal Management Corporation
(Acting on Behalf of St. Mary Land & Exploration Company)

COASTAL MANAGEMENT CORPORATION
OIL AND GAS PROJECT MANAGEMENT

VIA CERTIFIED MAIL P 245 753 664

May 13, 1998

Burlington Resources Oil & Gas
P.O. Box 51810
Midland, Texas 79710-1810

Re: Parkway (Delaware) Field
Parkway Delaware Unit No.'s 205, 508, 509, 703, and 704
Section 35, Township 19 South, Range 29 East
Eddy County, New Mexico

Gentlemen:

Attached please find Coastal Management Corporation's (Operator for St. Mary Land & Exploration Company) application to the Oil Conservation Division of the State of New Mexico to convert the captioned wells to injection. Said wells were permitted to be drilled as injectors on December 15, 1997 and were completed on various dates during the first quarter of 1998.

Should you have any questions with regard to this application, please feel free to contact the undersigned at 915-688-0756.

Sincerely,

COASTAL MANAGEMENT CORPORATION

Leila Esterly
Regulatory Coordinator

Enclosures
/le

COASTAL MANAGEMENT CORPORATION
OIL AND GAS PROJECT MANAGEMENT

VIA CERTIFIED MAIL P 245 753 605

May 13, 1998

Presidio Exploration, Inc.
5613 DTC Parkway, Suite 750
P.O. Box 6525
Englewood, Colorado 80155-0625

Re: Parkway (Delaware) Field
Parkway Delaware Unit No.'s 205, 508, 509, 703, and 704
Section 35, Township 19 South, Range 29 East
Eddy County, New Mexico

Gentlemen:

Attached please find Coastal Management Corporation's (Operator for St. Mary Land & Exploration Company) application to the Oil Conservation Division of the State of New Mexico to convert the captioned wells to injection. Said wells were permitted to be drilled as injectors on December 15, 1997 and were completed on various dates during the first quarter of 1998.

Should you have any questions with regard to this application, please feel free to contact the undersigned at 915-688-0756.

Sincerely,

COASTAL MANAGEMENT CORPORATION

Leila Esterly
Regulatory Coordinator

Enclosures
/le

COASTAL MANAGEMENT CORPORATION
OIL AND GAS PROJECT MANAGEMENT

VIA CERTIFIED MAIL P 245 753 666

May 13, 1998

Chevron U.S.A. Inc.
P.O. Box 36366
Houston, Texas 77236

Re: Parkway (Delaware) Field
Parkway Delaware Unit No.'s 205, 508, 509, 703, and 704
Section 35, Township 19 South, Range 29 East
Eddy County, New Mexico

Gentlemen:

Attached please find Coastal Management Corporation's (Operator for St. Mary Land & Exploration Company) application to the Oil Conservation Division of the State of New Mexico to convert the captioned wells to injection. Said wells were permitted to be drilled as injectors on December 15, 1997 and were completed on various dates during the first quarter of 1998.

Should you have any questions with regard to this application, please feel free to contact the undersigned at 915-688-0756.

Sincerely,

COASTAL MANAGEMENT CORPORATION

Leila Esterly
Regulatory Coordinator

Enclosures
/le

200 N. LORAINE, SUITE 700 ▪ P.O. BOX 2726 ▪ MIDLAND, TEXAS 79702-2726 ▪ PHONE 915-688-0700 ▪ FAX 915-688-0765

COASTAL MANAGEMENT CORPORATION
OIL AND GAS PROJECT MANAGEMENT

VIA CERTIFIED MAIL P 245 753 667

May 13, 1998

Santa Fe Energy Resources, Inc.
1616 S. Voss, Suite 1000
Houston, Texas 77057

Re: Parkway (Delaware) Field
Parkway Delaware Unit No.'s 205, 508, 509, 703, and 704
Section 35, Township 19 South, Range 29 East
Eddy County, New Mexico

Gentlemen:

Attached please find Coastal Management Corporation's (Operator for St. Mary Land & Exploration Company) application to the Oil Conservation Division of the State of New Mexico to convert the captioned wells to injection. Said wells were permitted to be drilled as injectors on December 15, 1997 and were completed on various dates during the first quarter of 1998.

Should you have any questions with regard to this application, please feel free to contact the undersigned at 915-688-0756.

Sincerely,

COASTAL MANAGEMENT CORPORATION

Leila Esterly
Regulatory Coordinator

Enclosures
/le

COASTAL MANAGEMENT CORPORATION
OIL AND GAS PROJECT MANAGEMENT

VIA CERTIFIED MAIL P 245 753 168

May 13, 1998

Eddy County Clerk
Attn: County Clerk
P.O. Box 850
Carlsbad, New Mexico 88221-0850

Re: Parkway (Delaware) Field
Parkway Delaware Unit No.'s 205, 508, 509, 703, and 704
Section 35, Township 19 South, Range 29 East
Eddy County, New Mexico

Gentlemen:

Attached please find Coastal Management Corporation's (Operator for St. Mary Land & Exploration Company) application to the Oil Conservation Division of the State of New Mexico to convert the captioned wells to injection. Said wells were permitted to be drilled as injectors on December 15, 1997 and were completed on various dates during the first quarter of 1998.

Should you have any questions with regard to this application, please feel free to contact the undersigned at 915-688-0756.

Sincerely,

COASTAL MANAGEMENT CORPORATION

Leila Esterly
Regulatory Coordinator

Enclosures
/le

200 N. LORAINE, SUITE 700 ▪ P.O. BOX 2726 ▪ MIDLAND, TEXAS 79702-2726 ▪ PHONE 915-688-0700 ▪ FAX 915-688-0765

COASTAL MANAGEMENT CORPORATION
OIL AND GAS PROJECT MANAGEMENT

VIA CERTIFIED MAIL P 245 753 669

May 13, 1998

Department of the Interior
Bureau of Land Management
2909 W. Second Street
Roswell, New Mexico 88201

Re: Parkway (Delaware) Field
Parkway Delaware Unit No.'s 205, 508, 509, 703, and 704
Section 35, Township 19 South, Range 29 East
Eddy County, New Mexico

Gentlemen:

Attached please find Coastal Management Corporation's (Operator for St. Mary Land & Exploration Company) application to the Oil Conservation Division of the State of New Mexico to convert the captioned wells to injection. Said wells were permitted to be drilled as injectors on December 15, 1997 and were completed on various dates during the first quarter of 1998.

Should you have any questions with regard to this application, please feel free to contact the undersigned at 915-688-0756.

Sincerely,

COASTAL MANAGEMENT CORPORATION

Leila Esterly
Regulatory Coordinator

Enclosures
/le

200 N. LORAINE, SUITE 700 ▪ P.O. BOX 2726 ▪ MIDLAND, TEXAS 79702-2726 ▪ PHONE 915-688-0700 ▪ FAX 915-688-0765

COASTAL MANAGEMENT CORPORATION
OIL AND GAS PROJECT MANAGEMENT

VIA CERTIFIED MAIL P 245 753 670

May 13, 1998

Commissioner of Public Lands
State of New Mexico
P.O. Box 1148
Santa Fe, New Mexico 87504-1148

Re: Parkway (Delaware) Field
Parkway Delaware Unit No.'s 205, 508, 509, 703, and 704
Section 35, Township 19 South, Range 29 East
Eddy County, New Mexico

Gentlemen:

Attached please find Coastal Management Corporation's (Operator for St. Mary Land & Exploration Company) application to the Oil Conservation Division of the State of New Mexico to convert the captioned wells to injection. Said wells were permitted to be drilled as injectors on December 15, 1997 and were completed on various dates during the first quarter of 1998.

Should you have any questions with regard to this application, please feel free to contact the undersigned at 915-688-0756.

Sincerely,

COASTAL MANAGEMENT CORPORATION

Leila Esterly
Regulatory Coordinator

Enclosures
/le

COASTAL MANAGEMENT CORPORATION
OIL AND GAS PROJECT MANAGEMENT

May 8, 1998

Carlsbad Current Argust
P.O. Box 1629
Carlsbad, New Mexico 88221

Re: Application to Inject Fluid
Parkway (Delaware) Field
Eddy County, New Mexico

Ladies and Gentlemen:

Please publish the attached legal notice in the legal notice section of the Carlsbad Current Argust for ONE day only, excluding Sunday. Upon publication, please forward a copy of the publication, an affidavit of publication designating that the Carlsbad Current Argust is of general circulation in Eddy County, New Mexico, and the billing to me at:

Coastal Management Corporation
Attn: Leila Esterly
P.O. Box 2726
Midland, Texas 79702-2726

Should you require additional information, please do not hesitate contacting the undersigned at 915-688-0756.

Sincerely,

COASTAL MANAGEMENT CORPORATION

Leila Esterly
Land Administrator

Enclosures
/le

NOTICE OF APPLICATION FOR FLUID INJECTION WELL PERMIT

Coastal Management Corporation (Operator for St. Mary Land & Exploration Company), P.O. Box 2726, Midland, Texas 79702, is applying to the State of New Mexico, Oil Conservation Division for a permit to inject fluid into a formation that is productive of oil and gas. The applicant proposes to inject fluid into the Delaware formation on the following five (5) wells which are all located in Section 35, Township 19 South, Range 29 East of the Parkway (Delaware) Field in Eddy County, New Mexico: Parkway Delaware Unit No. 205 located 1330' FNL & 180' FEL, Parkway Delaware Unit No. 508 located 1350' FSL & 2520' FEL, Parkway Delaware Unit No. 509 located 1210' FSL & 1210' FEL, Parkway Delaware Unit No. 703 located 2610' FSL & 430' FEL, and the Parkway Delaware Unit No. 704 located 1450' FSL & 330' FEL. Fluid will be injected into the subsurface depth interval as follows: PDU No. 205 from 4260' - 4364', PDU No. 508 from 4160' - 4278', PDU No. 509 from 4204' 4324', PDU No. 703 from 4194' - 4319', and PDU No. 704 from 4219' - 4344'. The expected maximum pressure on each well will be 2500 psi with an expected maximum injection volume of 600 BWPD.

Requests for a public hearing from persons who can show they are adversely affected, should be submitted in writing, within fifteen (15) days of publication, to the Oil Conservation Division of the State of New Mexico, 2040 S. Pacheco, Santa Fe, New Mexico 87505 (Telephone: 505-827-7131). Requests for further information concerning any aspect of the application should be directed to Leila Esterly at Coastal Management Corporation, P.O. Box 2726, Midland, Texas 79702-2726 (Telephone: 915-688-0700).

STATE OF NEW MEXICO §
§
COUNTY OF EDDY §

Before me, the undersigned authority, on this day personally appeared _____ (Name), the _____ (Title) of the **CARLSBAD CURRENT ARGUST**, a newspaper having general circulation in **EDDY** County, New Mexico, who by me duly sworn, deposes and says that the foregoing attached notice was published in said newspaper on the following date(s), to wit: _____.

_____

Subscribed and sworn to before me this the _____ day of _____, 1998, to certify which witness my hand and seal of office.

_____
Notary Public in and for

_____ County, New Mexico.

PARKWAY DELAWARE UNIT
Parkway Delaware Unit No. 205 - Convert to Injection

NMOC Form C-108 (Attachment)

III. Injection Well Information (Schematic Attached)

1. Lease: Parkway Delaware Unit
   Well No.: 205
   Location: 1330' FNL & 180' FEL, Unit Letter H

2. Casing: 13-3/8" @ 315' w/660 sx, circ. to surf. (hole 17-1/2")
   9-5/8" @ 1520' w/1075 sx, circ. to surf. (hole 12-1/4")
   7" @ 2989' w/625 sx, circ. to surf. (hole 8-3/4")
   4-1/2" @ 4400' w/300 sx (hole 6-1/4")
   TOC @ 1870'

3. Injection Tubing: 133 Jts. 2-3/8", 4.7 lb./ft., J-55 Dual Lined Fiber Coated

4. Packer set @ 4210'

B. Other Well Information

1. Injection Formation: Delaware
   Field: Parkway Delaware

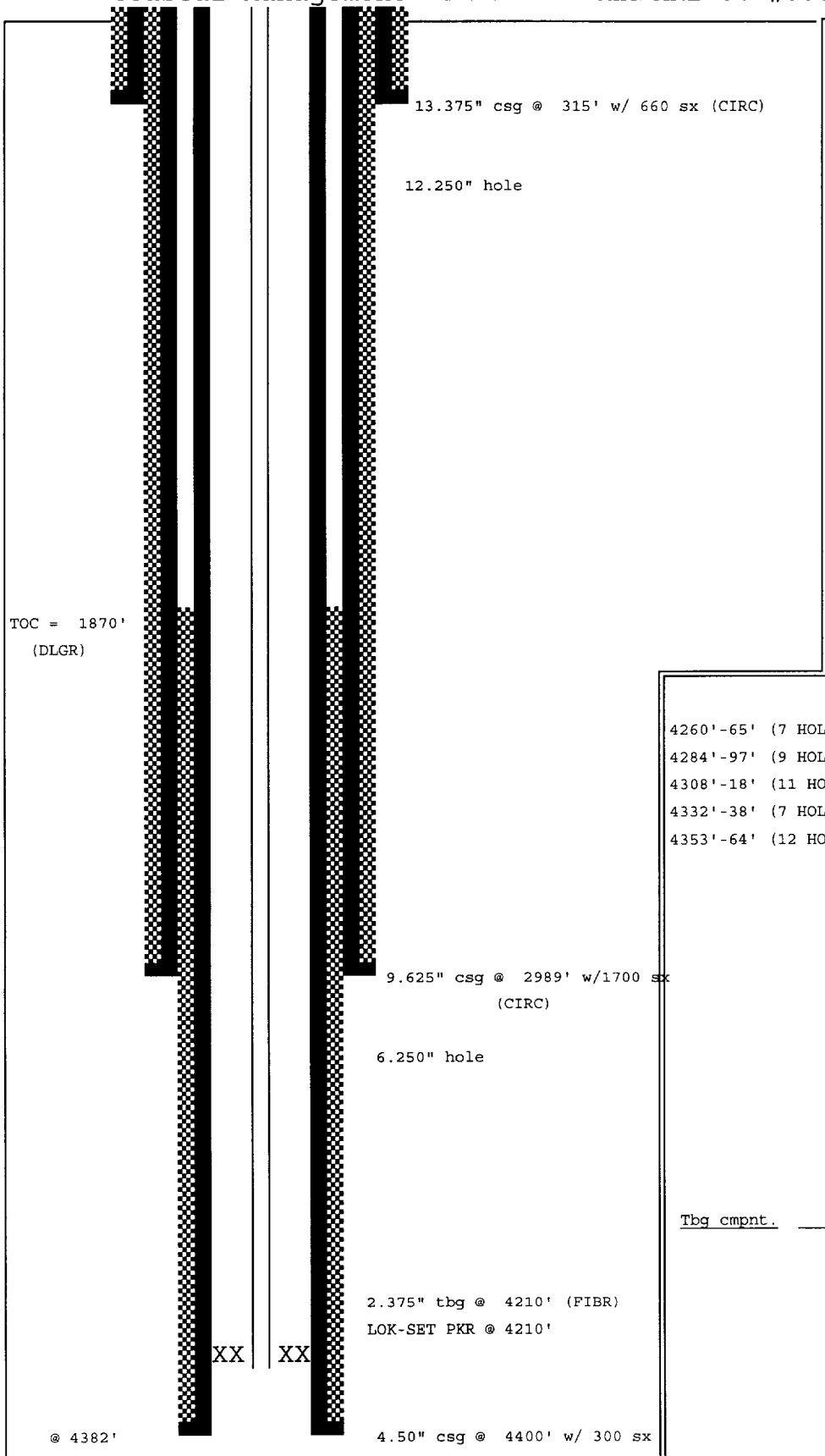
2. Existing Perforations: 4260'-65', 4271'-80', 4284'-97', 4298'-4302', 4308'-18', 4324'-29', 4332'-38', 4340'-46', 4353'-64'

3. This well was permitted to be drilled as an injection well by Coastal Management Corporation operation for St. Mary Land & Exploration Company on December 15, 1997.

4. There are no other perforated or tested intervals in this well.

5. Within the area of this project, the Yates formation is a marginal producing zone at ±1440'.

Coastal Management PARKWAY DELAWARE UT #000205 (INJ) API # 30-015-30026



FIELD: PARKWAY; Eddy Co., NM
LOC: 1330' FNL; 180' FEL; Sec35; T-19-S; R-28-
ELEV: 3338' (0.0' above GL)
DATE: 05/11/98 BY: Leila Esterly

CASING RECORD

SURFACE CASING

O.D.	#/ft	GRADE	CONN	SET AT
13.375	48.00	H-40		315'

INTERMEDIATE CASING

O.D.	#/ft	GRADE	CONN	SET AT
9.625	36.00	J-55		1520'
7.000	20.00	J-55		2989'

PRODUCTION CASING

O.D.	#/ft	GRADE	CONN	SET AT
4.500	10.50	J-55		4400'

TUBING

O.D.	#/ft	GRADE	CONN	SET AT
2.375	4.70	J-55	FRP	0 - 4210'

WELL HISTORY

4260'-65' (7 HOLES), 4271'-80' (10 HOLES),
4284'-97' (9 HOLES), 4298'-4302' (5 HOLES),
4308'-18' (11 HOLES), 4324'-29' (6 HOLES),
4332'-38' (7 HOLES), 4340'-46' (7 HOLES),
4353'-64' (12 HOLES)

Tbg cmpnt.	OD	ppf	Gr	#Jts	Depth	Entry date

T.D. = 4400' PBTD: 4382'

Comments:

PARKWAY DELAWARE UNIT
Parkway Delaware Unit No. 508 - Convert to Injection

NMOC Form C-108 (Attachment)

III. Injection Well Information (Schematic Attached)

1. Lease: Parkway Delaware Unit
   Well No.: 508
   Location: 1350' FSL & 2520' FEL, Unit Letter J

2. Casing: 13-3/8" @ 359' w/350 sx, circ. to surf. (hole 17-1/2")
   9-5/8" @ 1480' w/560 sx, circ. to surf. (hole 12-1/4")
   7" @ 3000' w/700 sx, circ. to surf. (hole 8-3/4")
   4-1/2" @ 4400' w/200 sx (hole 6-1/4")
   TOC @ 2100'

3. Injection Tubing: 130 Jts. 2-3/8", 5.2 lb./ft., J-55 Dual Lined Fiber Coated

4. Packer set @ 4097'

B. Other Well Information

1. Injection Formation: Delaware
   Field: Parkway Delaware

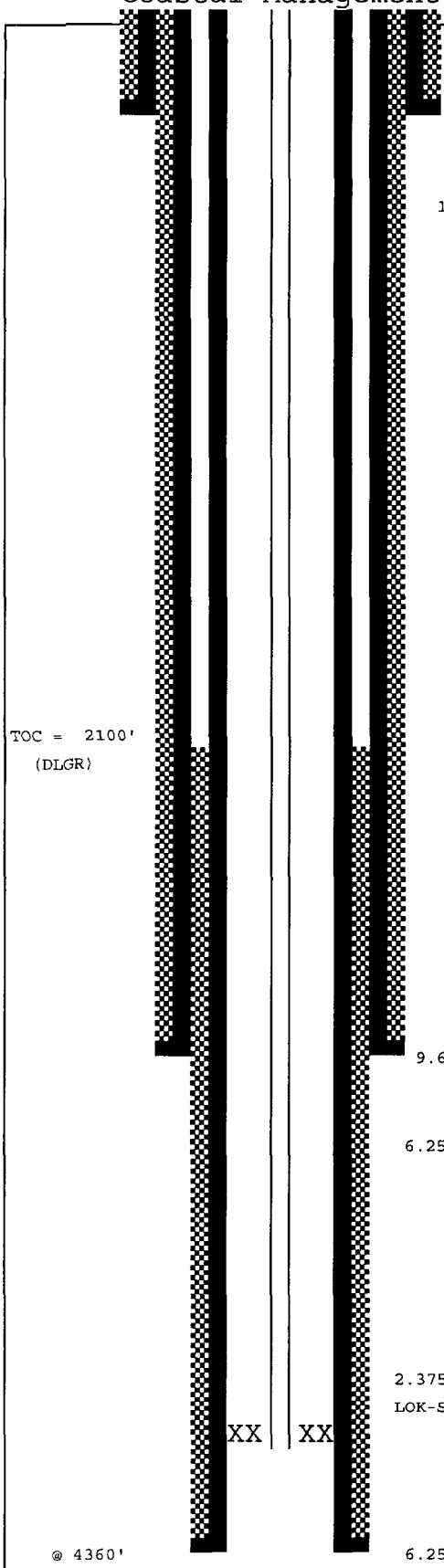
2. Existing Perforations: 4160'-4278', 1 SPF

3. This well was permitted to be drilled as an injection well by Coastal Management Corporation operation for St. Mary Land & Exploration Company on December 15, 1997.

4. There are no other perforated or tested intervals in this well.

5. Within the area of this project, the Yates formation is a marginal producing zone at ±1440'.

Coastal Management PARKWAY DELAWARE UT #0000508 (INJ) API # 30-015-3002?



FIELD: PARKWAY; Eddy Co., NM
LOC: 1350' FSL; 2520' FEL; Sec35; T-19-S; R-2?-
ELEV: 3328' (0.0' above DF)
DATE: 05/12/98 BY: Leila Esterly

CASING RECORD

SURFACE CASING

O.D.	#/ft	GRADE	CONN	SET AT
13.375	48.00	H-40		359'

INTERMEDIATE CASING

O.D.	#/ft	GRADE	CONN	SET AT
9.625	36.00	J-55		1480'
7.000	20.00	J-55		3000'

PRODUCTION CASING

O.D.	#/ft	GRADE	CONN	SET AT
6.250	11.60	J-55		4400'

TUBING

O.D.	#/ft	GRADE	CONN	SET AT
2.375	4.70	J-55	FRP	0 - 4097'

WELL HISTORY

Perforations: 4160'-4278', 1 SPF

Tbg cmpnt.	OD	ppf	Gr	#Jts	Depth	Entry date

T.D. = 4400' PBTD: 4360'

Comments:

PARKWAY DELAWARE UNIT
Parkway Delaware Unit No. 509 - Convert to Injection

NMOC Form C-108 (Attachment)

III. Injection Well Information (Schematic Attached)

1. Lease: Parkway Delaware Unit
   Well No.: 509
   Location: 1210' FSL & 1210' FEL, Unit Letter P

2. Casing: 13-3/8" @ 314' w/400 sx, circ. to surf. (hole 17-1/2")
   9-5/8" @ 1500' w/720 sx, circ. to surf. (hole 12-1/4")
   7" @ 3000' w/240 sx, circ. to surf. (hole 8-3/4")
   4-1/2" @ 4394' w/200 sx (hole 6-1/4")
   TOC @ 2380'

3. Injection Tubing: 132 Jts. 2-3/8", 5.2 lb./ft., J-55 Dual Lined Fiber Coated

4. Packer set @ 4162'

B. Other Well Information

1. Injection Formation: Delaware
   Field: Parkway Delaware

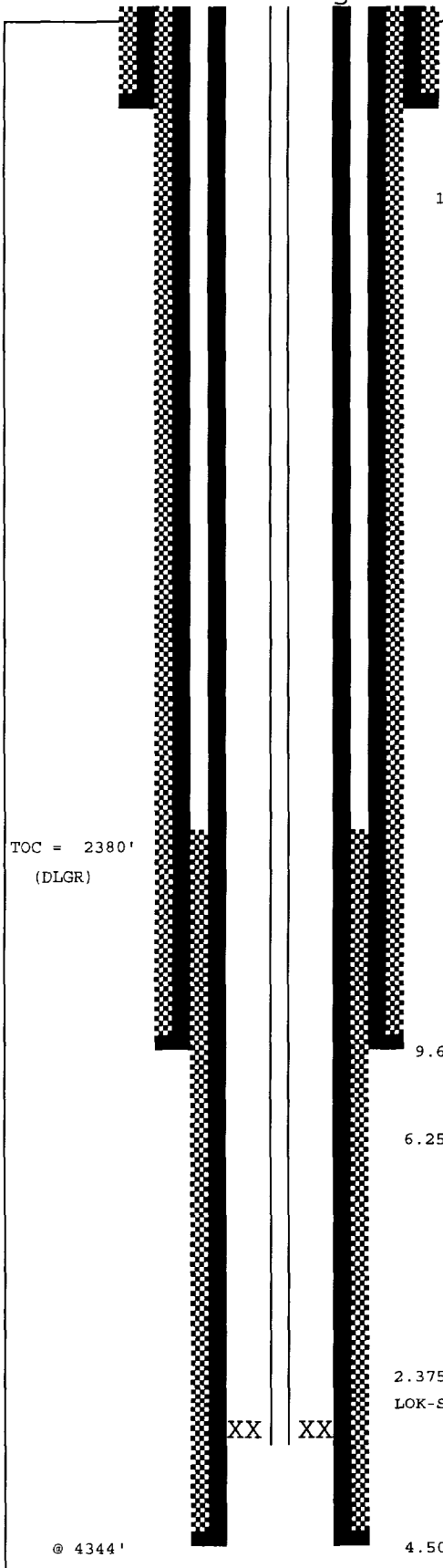
2. Existing Perforations: 4204'-4324', 1 SPF

3. This well was permitted to be drilled as an injection well by Coastal Management Corporation operation for St. Mary Land & Exploration Company on December 15, 1997.

4. There are no other perforated or tested intervals in this well.

5. Within the area of this project, the Yates formation is a marginal producing zone at ±1440'.

Coastal Management PARKWAY DELAWARE UT #0000509 (INJ) API # 30-015-3003C



FIELD: PARKWAY; Eddy Co., NM
LOC: 1210' FSL; 1210' FEL; Sec35; T-19-S; R-28-
ELEV: 3333' (0.0' above DF)
DATE: 05/12/98 BY: Leila Esterly

CASING RECORD

SURFACE CASING

O.D.	#/ft	GRADE	CONN	SET AT
13.375	48.00	H-40		314'

INTERMEDIATE CASING

O.D.	#/ft	GRADE	CONN	SET AT
9.625	36.00	J-55		1500'
7.000	20.00	J-55		3000'

PRODUCTION CASING

O.D.	#/ft	GRADE	CONN	SET AT
4.500	11.60	J-55		4394'

TUBING

O.D.	#/ft	GRADE	CONN	SET AT
2.375	5.20	J-55	FRP	0 - 4162'

WELL HISTORY

Perforations: 4204'-4324', 1 SPF

T.D. = 4400' PBTD: 4344'

Comments:

PARKWAY DELAWARE UNIT
Parkway Delaware Unit No. 703 - Convert to Injection

NMOC Form C-108 (Attachment)

III. Injection Well Information (Schematic Attached)

1. Lease: Parkway Delaware Unit
   Well No.: 703
   Location: 2610' FSL & 430' FEL, Unit Letter I

2. Casing: 13-3/8" @ 352' w/400 sx, circ. to surf. (hole 17-1/2")
   9-5/8" @ 1500' w/1050 sx, circ. to surf. (hole 12-1/4")
   7" @ 3000' w/625 sx, circ. to surf. (hole 8-3/4")
   4-1/2" @ 4000' w/200 sx (hole 6-1/4")
   TOC @ 2114'

3. Injection Tubing: 132 Jts. 2-3/8", 5.2 lb./ft., J-55 Dual Lined Fiber Coated

4. Packer set @ 4269'

B. Other Well Information

1. Injection Formation: Delaware
   Field: Parkway Delaware

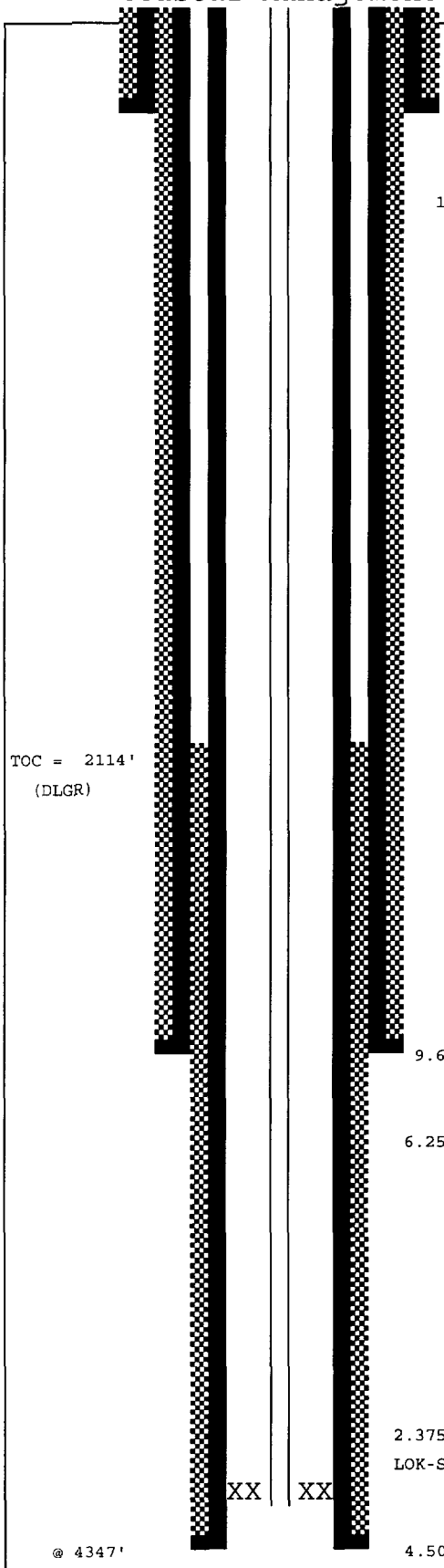
2. Existing Perforations: 4194'-4201', 4208'-15', 4218'-4319'

3. This well was permitted to be drilled as an injection well by Coastal Management Corporation operation for St. Mary Land & Exploration Company on December 15, 1997.

4. There are no other perforated or tested intervals in this well.

5. Within the area of this project, the Yates formation is a marginal producing zone at ±1440'.

Coastal Management PARKWAY DELAWARE UT #0000703 (INJ) API # 30-015-30027



FIELD: PARKWAY; Eddy Co., NM
LOC: 2610' FSL; 430' FEL; Sec35; T-19-S; R-28-
ELEV: 3345' (0.0' above DF)
DATE: 05/12/98 BY: Leila Esterly

CASING RECORD

SURFACE CASING

O.D.	#/ft	GRADE	CONN	SET AT
13.375	48.00	H-40		352'

INTERMEDIATE CASING

O.D.	#/ft	GRADE	CONN	SET AT
9.625	36.00	J-55		1500'
7.000	20.00	J-55		3000'

PRODUCTION CASING

O.D.	#/ft	GRADE	CONN	SET AT
4.500	10.50	J-55		4400'

TUBING

O.D.	#/ft	GRADE	CONN	SET AT
2.375	5.20	J-55	FRP	0 - 4269'

WELL HISTORY

Perforations: 4194'-4201'(1 JSPF), 4208'-15' (1 JSPF), 4218'-4319' (1 JSPF)

T.D. = 4400' PBTD: 4347'

Comments:

PARKWAY DELAWARE UNIT
Parkway Delaware Unit No. 704 - Convert to Injection

NMOC Form C-108 (Attachment)

III. Injection Well Information (Schematic Attached)

1. Lease: Parkway Delaware Unit
   Well No.: 704
   Location: 1450' FSL & 330' FEL, Unit Letter I

2. Casing: 13-3/8" @ 355' w/375 sx, circ. to surf. (hole 17-1/2")
   9-5/8" @ 1500' w/750 sx, circ. to surf. (hole 12-1/4")
   7" @ 3000' w/475 sx, circ. to surf. (hole 8-3/4")
   4-1/2" @ 4400' w/200 sx (hole 6-1/4")
   TOC @ 2126'

3. Injection Tubing: 130 Jts. 2-3/8", 5.2 lb./ft., J-55 Dual Lined Fiber Coated

4. Packer set @ 4185'

B. Other Well Information

1. Injection Formation: Delaware
   Field: Parkway Delaware

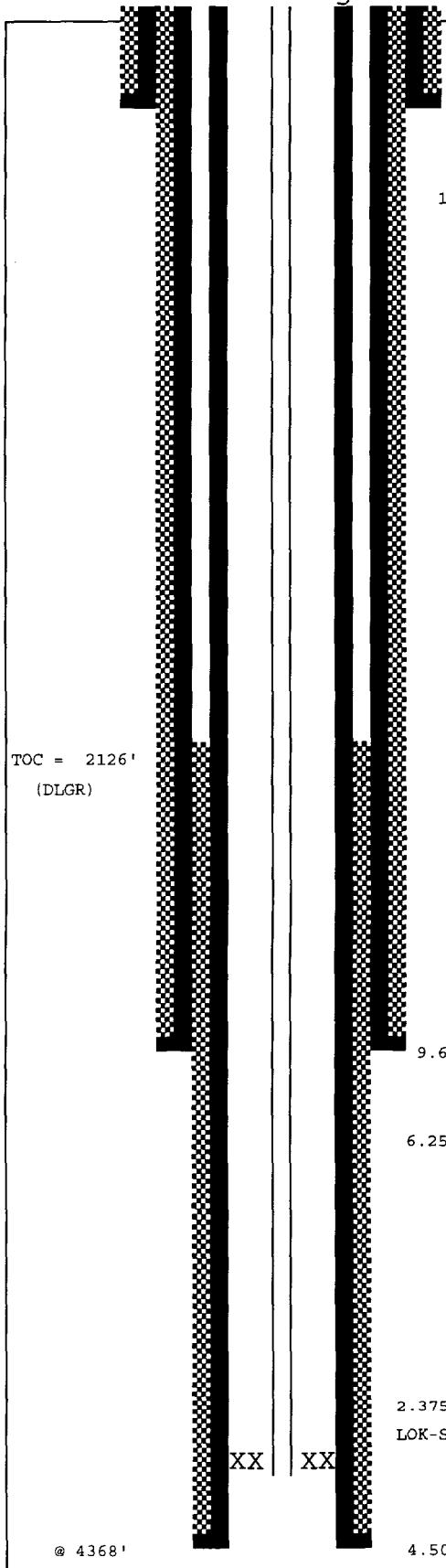
2. Existing Perforations: 4219'-27', 4232'-56', 4268'-4344'

3. This well was permitted to be drilled as an injection well by Coastal Management Corporation operation for St. Mary Land & Exploration Company on December 15, 1997.

4. There are no other perforated or tested intervals in this well.

5. Within the area of this project, the Yates formation is a marginal producing zone at ±1440'.

Coastal Management PARKWAY DELAWARE UT #0000704 (INJ) API # 30-015-30021



FIELD: PARKWAY; Eddy Co., NM
LOC: 1450' FSL; 330' FEL; Sec35; T-19-S; R-28-
ELEV: 3338' (0.0' above DF)
DATE: 05/12/98 BY: Leila Esterly

CASING RECORD

SURFACE CASING

O.D.	#/ft	GRADE	CONN	SET AT
13.375	48.00	H-40		355'

INTERMEDIATE CASING

O.D.	#/ft	GRADE	CONN	SET AT
9.625	36.00	J-55		1500'
7.000	29.00	J-55		3000'

PRODUCTION CASING

O.D.	#/ft	GRADE	CONN	SET AT
4.500	10.50	J-55		4400'

TUBING

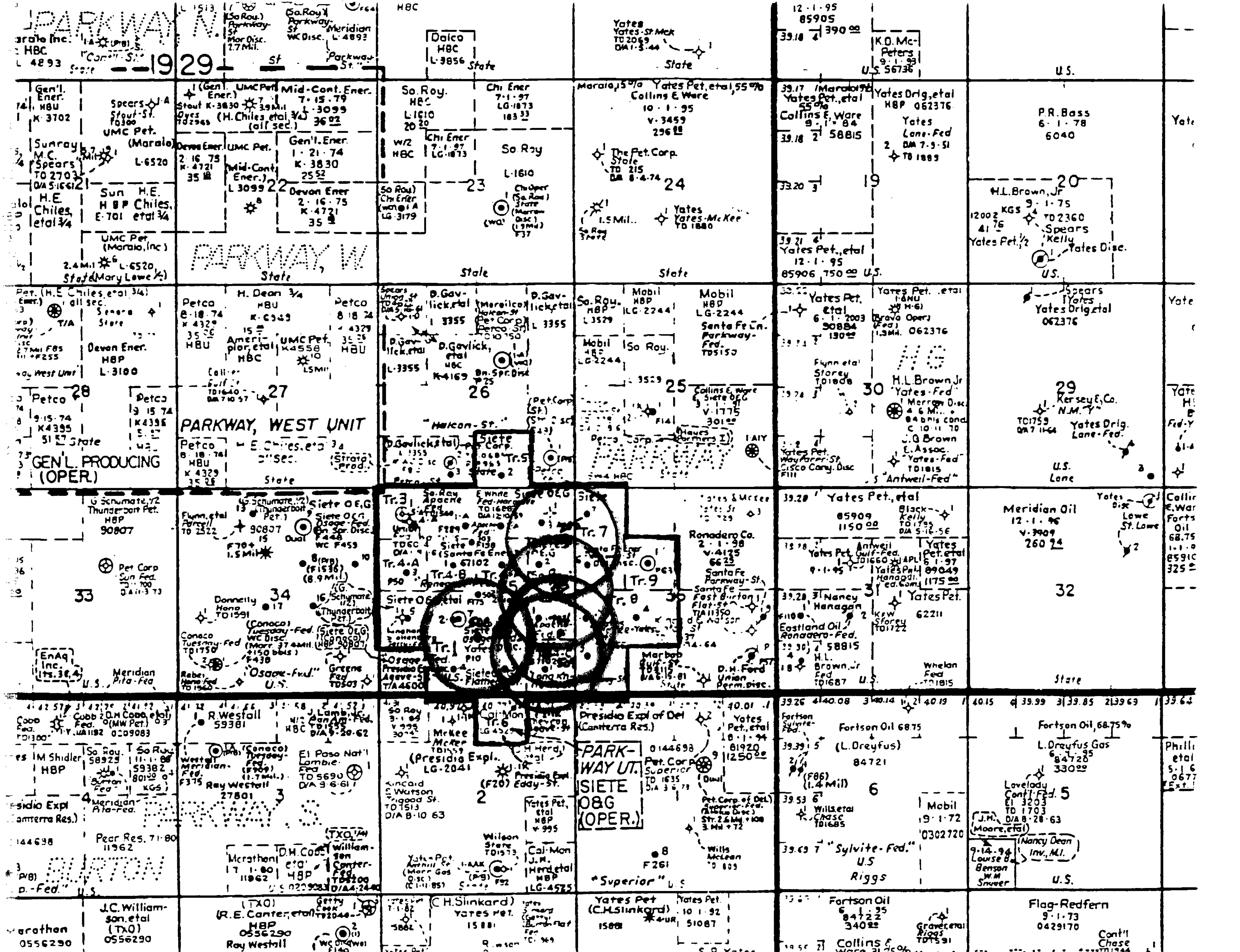
O.D.	#/ft	GRADE	CONN	SET AT
2.375	5.20	J-55	FRP	0 - 4185'

WELL HISTORY

Perforations: 4219'-27' (9 Holes), 4232'-56' (25 Holes), 4268'-4344' (77 Holes)

T.D. = 4400' PBTD: 4368'

Comments:


PARKWAY N.
PARKWAY, W.
PARKWAY, WEST UNIT
GEN'L. PRODUCING (OPER.)
PARK-WAY UT.
SIETE O&G (OPER.)
Gen'l. Ener.
UMC Pet.
Mid-Cont. Ener.
So. Roy.
Dalco
Chi Ener
Yates Pet., etal
Collins E. Ware
Yates Drlg., etal
P.R. Bass
H.L. Brown, Jr
Petco
H. Dean 3/4
Devon Ener.
D. Gavlick, etal
Mobil
Santa Fe En.
Meridian Oil
Ronadero Co.
Fortson Oil
L. Dreyfus
L. Dreyfus Gas
Presidio Expl.
R. Westall
Pet. Corp.
Flag-Redfern
J.C. William-son, etal
"Superior"
"Sylvite-Fed."
Riggs
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PARKWAY DELAWARE UNIT
AREA OF REVIEW

STATUS	WELL NAME	WELL NAME PRIOR TO UNIT	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD	PBTD	COMP. INTERVAL	CASING RECORD
Active	Parkway Delaware Unit No. 201	Apache Federal No. 1-A	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 890' FNL & 990' FEL	Oil	3/22/89	4/12/89	4550'	4501'	4221' - 4239'	13 3/8" @ 359' w/955 SXS 8 5/8" @ 3200' w/1885 SXS 5 1/2" @ 4549' w/400 SXS
Active	Parkway Delaware Unit No. 202	Apache Federal No. 2-A	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 990' FNL & 1980' FEL	Oil	4/3/89	4/22/89	4550'	4504'	4136' - 4229'	13 3/8" @ 365' w/378 SXS 8 5/8" @ 3210' w/2300 SXS 5 1/2" @ 4550' w/500 SXS
Active	Parkway Delaware Unit No. 203	Apache Federal No. 3-A	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 990' FNL & 2310' FWL	Oil	4/13/89	6/16/89	4550'	4546'	3949' - 4264'	13 3/8" @ 372' w/725 SXS 8 5/8" @ 3200' w/2700 SXS 5 1/2" @ 4550' w/540 SXS
Active	Parkway Delaware Unit No. 204	Apache Federal No. 4-A	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 990' FNL & 940' FWL	Injector	7/13/89	8/16/89	4550'	4505'	4295' - 4461'	13 3/8" @ 353' w/465 SXS 8 5/8" @ 3200' w/4145 SXS 5 1/2" @ 4550' w/425 SXS
Active	Parkway Delaware Unit No. 301	Renegade Federal No. 2	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 1980' FNL & 1980' FEL	Oil	11/16/88	12/3/88	5000'	4958'	4190' - 4211'	13 3/8" @ 365' w/500 SXS 8 5/8" @ 3201' w/790 SXS 5 1/2" @ 5000' w/350 SXS
Active	Parkway Delaware Unit No. 302	Renegade Federal No. 3	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 2230' FNL & 760' FWL	Injector	11/15/88	1/26/89	5000'	4298'	4127' - 4142'	13 3/8" @ 363' w/700 SXS 8 5/8" @ 3202' w/1790 SXS 5 1/2" @ 5000' w/450 SXS
Active	Parkway Delaware Unit No. 303	NA	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 1420' FNL & 2500' FWL	Injector	5/17/93	6/10/93	4800'	4764'	4247' - 4138'	20" @ 258' w/720 SXS 13 3/8" @ 1180' w/1050 SXS 8 5/8" @ 3200' w/1615 SXS 5 1/2" @ 4800' w/485 SXS
Active	Parkway Delaware Unit No. 304	NA	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 1485' FNL & 1485' FEL	Injector	4/22/97	6/25/97	4430'		4164' 4261'	13 3/8" @ 356' w/540 SXS 9 5/8" @ 1500' w/535 SXS 7" @ 3045' w/350 SXS 4 1/2" @ 4422' w/250 SXS
Active	Parkway Delaware Unit No. 401	Renegade Federal No. 1	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 1980' FNL & 1980' FWL	Oil	6/16/88	10/22/88	5800'	5752'	3940' - 4058'	13 3/8" @ 357' w/665 SXS 5 1/2" @ 5795' w/2915 SXS
Active	Parkway Delaware Unit No. 501	Osage Federal No. 1	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 1980' FSL & 1980' FEL	Oil	7/18/88	8/12/88	5910'	5848'	4135' - 4168'	13 3/8" @ 353' w/350 SXS 8 5/8" @ 3193' w/2860 SXS 5 1/2" @ 5908' w/620 SXS
Active	Parkway Delaware Unit No. 502	Osage Federal No. 2	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 1980' FSL & 1980' FWL	Oil	10/2/88	10/24/88	5000'	4948'	4157' - 4187'	13 3/8" @ 363' w/740 SXS 5 1/2" @ 4993' w/1550 SXS
Active	Parkway Delaware Unit No. 503	Osage Federal No. 3	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 660' FSL & 1980' FWL	Oil	11/2/88	11/22/88	5000'	4933'	4201' - 4222'	13 3/8" @ 360' w/755 SXS 8 5/8" @ 3218' w/2295 SXS 5 1/2" @ 5000' w/400 SXS
Shut-in	Parkway Delaware Unit No. 504	Osage Federal No. 4	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 660' FSL & 1980' FWL	Oil	12/1/88	12/30/88	5000'	4948'	4018' - 4120'	13 3/8" @ 381' w/400 SXS 8 5/8" @ 3200' w/1405 SXS 5 1/2" @ 5000' w/420 SXS
Active	Parkway Delaware Unit No. 505	Osage Federal No. 5	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 1980' FSL & 760' FWL	Injector	11/30/88	1/10/89	5000'	4958'	4135' - 4150'	20" @ 173' w/200 SXS 13 3/8" @ 364' w/500 SXS 8 5/8" @ 3200' w/800 SXS 5 1/2" @ 5000' w/450 SXS
Active	Parkway Delaware Unit No. 507	NA	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 2628' FSL & 1485' FEL	Injector	4/6/97	6/25/97	4400'	4385'	4164' - 4280'	13 3/8" @ 354' w/390 SXS 9 5/8" @ 1366' w/500 SXS 7" @ 2988' w/480 SXS 4 1/2" @ 4399' w/210 SXS
Active	Parkway Delaware Unit No. 701	Apache Federal No. 1	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 1980' FSL & 990' FEL	Oil	12/12/88	2/1/89	4500'	4453'	4182' - 4218'	13 3/8" @ 365' w/805 SXS 8 5/8" @ 3200' w/2300 SXS 5 1/2" @ 4500' w/650 SXS
Active	Parkway Delaware Unit No. 702	Apache Federal No. 2	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 1980' FNL & 990' FEL	Oil	3/9/89	4/18/89	4549'	4492'	4176' - 4210'	13 3/8" @ 344' w/625 SXS 8 5/8" @ 3200' w/2300 SXS 5 1/2" @ 4500' w/650 SXS

PARKWAY DELAWARE UNIT
AREA OF REVIEW

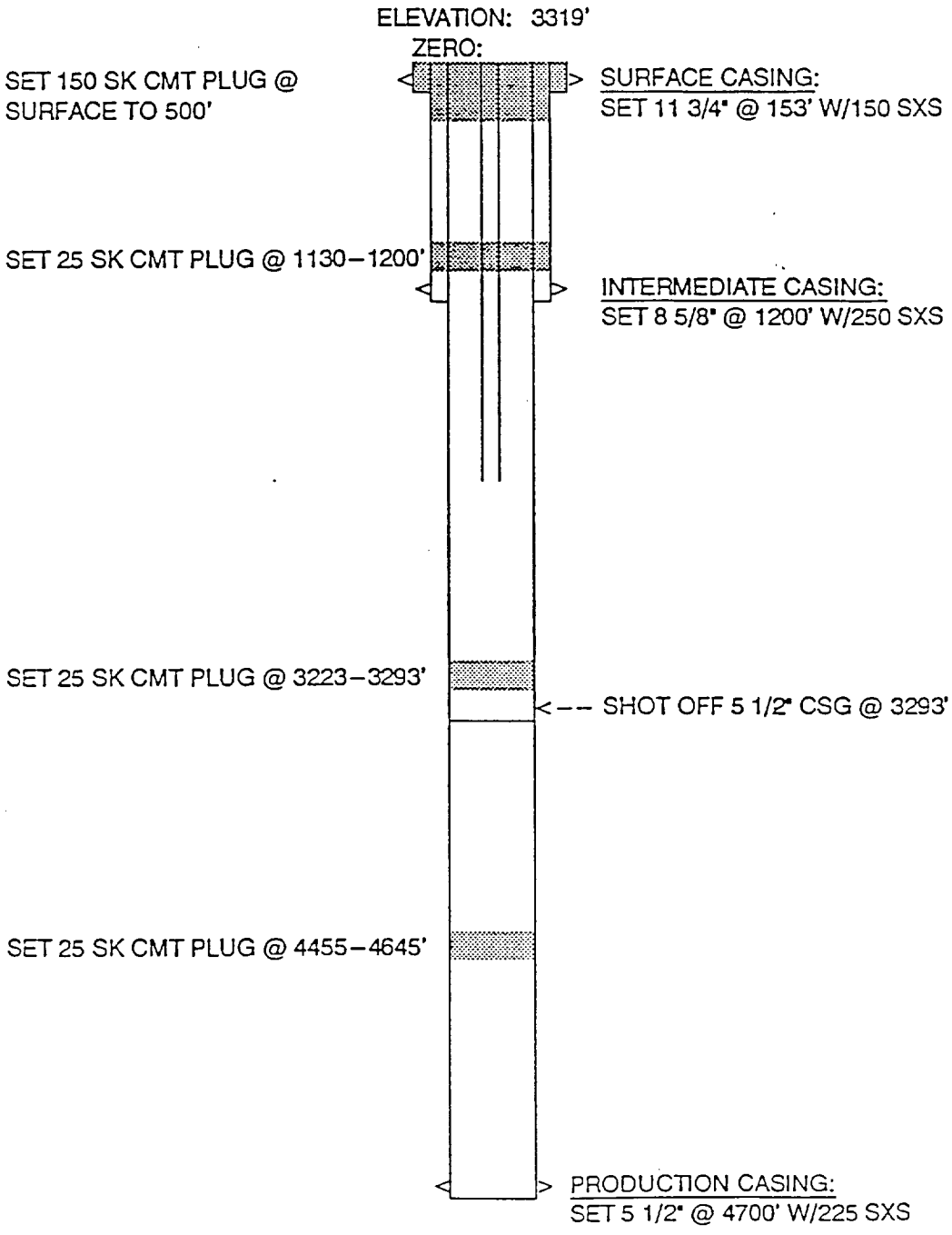
STATUS	WELL NAME	WELL NAME PRIOR TO UNIT	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD	PBTD	COMP. INTERVAL	CASING RECORD
Shut-in	Parkway Delaware Unit No. 801	Longknife Federal No. 1	St. Mary Land & Exploration Co. c/o Coastal Management Corporation	Section 35, T19S, R29E 660' FSL & 810' FEL	Oil	12/13/88	3/1/89	6000'	5980'	5930' - 5936'	10 3/4" @ 370' w/350 SXS 7" @ 3200' w/100 SXS 4 1/2" @ 4850' w/450 SXS

SIETE OIL & GAS CORPORATION

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

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

API #:



DRAWN BY: BJG

TD: 6014'

Form 9-331a
(Feb. 1951)

X			

Approval expires 12-31-65.

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office ____________
Lease No. [illegible]
Unit ____________

SUNDRY NOTICES AND REPORTS ON WELLS

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

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

January, 1955

Well No. Federal Walker 1-35 is located 660 ft. from {N} line and 660 ft. from {W} line of sec. 35

NW/4 of Section 35 (¼ Sec. and Sec. No.) — [illegible] (Twp.) — [illegible] (Range) — N.M.P.M. (Meridian)

Wildcat (Field) — Eddy (County or Subdivision) — New Mexico (State or Territory)

The elevation of the derrick floor above sea level is 3305 ft. (D.F.)

DETAILS OF WORK

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

Spotted 25 sx. cement plug [illegible]'. Shot off 5-1/2" casing at [illegible]' and recovered [illegible]' of 5-1/2" casing.
Spotted 25 sx. cement plugs at [illegible]' and [illegible]' and 150 sx. cement from surface to [illegible]'.
The well was plugged and abandoned January 10, 1955, and marked with a 4" O.D. piece of pipe rising vertically 4' above ground level.

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

Company Union Oil Company of California

Address 619 West Texas Avenue
Midland, Texas

By [signature]

Title Assistant Division Engineer

U. S. GOVERNMENT PRINTING OFFICE 16—8437-5

EDDY WILDCAT STATE N.M. KROEHLEIN 2310-56

Union Oil Co. of Calif - #1-35 - Fed. ELEV 3319'
Walter

660'FNL & FWL
Sec. 35, T. 19S, R. 29E

Casing Record	Tops	
11 3/4- 153-150	Anhy	195
8 5/8-1200-250	T/Salt	257
5 1/2-4700-225		
	B/Salt	1143
	Yates	1335
	Dela Sd.	3940
	Bone Springs	5690

11-22-55 1-9-56

P&A

TD 6014' Li.

Swb. 100% SW

CONT'D. PAGE 2

Crd. 1527-79 rec. 52'; 10' hard dse dolo, 5-1/2' dolo fxln stn. on vert fracs. 16' dolo shale ptgs. 6-1/2' sand grey some fluor por bldg. oil, 4' dolo hard dse NS. 10' lite grey sand, fluor bldg oil.
Crd. 3375-3424 rec. 49' dark grey fx dse, lime sulf.odor no show.
Crd. 3983-4033 rec.50' grey fg. sand w/sho of salt wtr.
DST 3952-4033 op 2 hrs. rec. 1150' MCSW w/NS FP 60-595# SIP 1445# 20 mins,
DST 4204-63 op 2 hrs. rec. 100' SO&HGCM, FP 70-80# SIP 95# 20 mins.
Took sidewall cores 3635-4906, SW Cores fgs w/SSG.
4616'fg sd stn, fluor, 4621' fg sd sli stn. 4623 fg sd goo fluor, 4625' fg. sd SSO. 4627' fg sd stn, fluor 4629' fg sd sli fluor 4635' fg sd no sho. 4638' fg sd no sho. 4849' fg w/SSG, 4881' fg sd w/SSG, 4887' fg sd shaley NS, 4906' fg sd NS.

CONT'D ON PAGE 3

4610-32 pkr failed str pkr.
T 4611-4647 op 1 hr 30 mins rec. 150' s oil & GCM 5 to
10% oil FP 50# SIP 1225# 20 mins.
f 68/4612-29 A/500 MCA, SF 10,000 4612-29 Swb pm rt of
load swb dry.

PARKWAY DELAWARE UNIT
Parkway Delaware Unit No. 205 - Convert to Injection

NMOC Form C-108 (Attachment)

VII. Injection Data

1. Injection Rates
   a. Proposed average daily water injection is 500 BWPD.
   b. Maximum rate of daily water injection is 600 BWPD.

2. The injection station for gathering and processing the injection water will be a closed system.

3. Injection Pressures
   a. Proposed average daily injection pressure is 1500 psi.
   b. Maximum daily injection pressure is 2500 psi.

4. Chemical analysis of injection and formation water (see attached water analysis).
   a. Proposed injection fluid will be produced Delaware water, TOG Federal water and water from the Exx Federal #1 WSW. The Petrolite Lab analysis dated May 14, 1997 indicates no compatibility problems with mixing these waters.

5. Water injection will be into a zone currently productive of oil and gas.

PARKWAY DELAWARE UNIT
Parkway Delaware Unit No. 508 - Convert to Injection

NMOC Form C-108 (Attachment)

VII. Injection Data

1. Injection Rates
   a. Proposed average daily water injection is 500 BWPD.
   b. Maximum rate of daily water injection is 600 BWPD.

2. The injection station for gathering and processing the injection water will be a closed system.

3. Injection Pressures
   a. Proposed average daily injection pressure is 1500 psi.
   b. Maximum daily injection pressure is 2500 psi.

4. Chemical analysis of injection and formation water (see attached water analysis).
   a. Proposed injection fluid will be produced Delaware water, TOG Federal water and water from the Exx Federal #1 WSW. The Petrolite Lab analysis dated May 14, 1997 indicates no compatibility problems with mixing these waters.

5. Water injection will be into a zone currently productive of oil and gas.

PARKWAY DELAWARE UNIT
Parkway Delaware Unit No. 509 - Convert to Injection

NMOC Form C-108 (Attachment)

VII. Injection Data

1. Injection Rates
   a. Proposed average daily water injection is 500 BWPD.
   b. Maximum rate of daily water injection is 600 BWPD.

2. The injection station for gathering and processing the injection water will be a closed system.

3. Injection Pressures
   a. Proposed average daily injection pressure is 1500 psi.
   b. Maximum daily injection pressure is 2500 psi.

4. Chemical analysis of injection and formation water (see attached water analysis).
   a. Proposed injection fluid will be produced Delaware water, TOG Federal water and water from the Exx Federal #1 WSW. The Petrolite Lab analysis dated May 14, 1997 indicates no compatibility problems with mixing these waters.

5. Water injection will be into a zone currently productive of oil and gas.

PARKWAY DELAWARE UNIT
Parkway Delaware Unit No. 703 - Convert to Injection

NMOC Form C-108 (Attachment)

VII. Injection Data

1. Injection Rates
   a. Proposed average daily water injection is 500 BWPD.
   b. Maximum rate of daily water injection is 600 BWPD.

2. The injection station for gathering and processing the injection water will be a closed system.

3. Injection Pressures
   a. Proposed average daily injection pressure is 1500 psi.
   b. Maximum daily injection pressure is 2500 psi.

4. Chemical analysis of injection and formation water (see attached water analysis).
   a. Proposed injection fluid will be produced Delaware water, TOG Federal water and water from the Exx Federal #1 WSW. The Petrolite Lab analysis dated May 14, 1997 indicates no compatibility problems with mixing these waters.

5. Water injection will be into a zone currently productive of oil and gas.

PARKWAY DELAWARE UNIT
Parkway Delaware Unit No. 704 - Convert to Injection

NMOC Form C-108 (Attachment)

VII. Injection Data

1. Injection Rates
   a. Proposed average daily water injection is 500 BWPD.
   b. Maximum rate of daily water injection is 600 BWPD.

2. The injection station for gathering and processing the injection water will be a closed system.

3. Injection Pressures
   a. Proposed average daily injection pressure is 1500 psi.
   b. Maximum daily injection pressure is 2500 psi.

4. Chemical analysis of injection and formation water (see attached water analysis).
   a. Proposed injection fluid will be produced Delaware water, TOG Federal water and water from the Exx Federal #1 WSW. The Petrolite Lab analysis dated May 14, 1997 indicates no compatibility problems with mixing these waters.

5. Water injection will be into a zone currently productive of oil and gas.

PETROLITE

Water Analysis Report from Petrolite Corporation

Summary of Mixing Waters											
Sample Number	17936.00	17937.00									
Company	COASTAL	COASTAL									
Lease	OSAGE	PARKWAY									
Well	WELL #1	J.C. Exx Fed #1 WSW									
Sample Location	PUMP	W/H									
Anions (mg/L)											
Chloride	137,172	23,430									
Bicarbonate	134	195									
Carbonate	0.00	0.00									
Sulfate	750	175									
Phosphate	0.00	0.00									
Borate	0.00	0.00									
Silicate	0.00	0.00									
Cations (mg/L)											
Sodium	59,864	12,592									
Magnesium	3,462	548									
Calcium	20,000	1,500									
Strontium											
Barium											
Iron	5.00	1.30									
Potassium	0.00	0.00									
Aluminum	0.00	0.00									
Chromium	0.00	0.00									
Copper	0.00	0.00									
Lead	0.00	0.00									
Manganese	0.00	0.00									
Nickel	0.00	0.00									
Anion/Cation Ratio	***1.00***	***1.00***									
TDS (mg/L)	221,387	38,442									
Density (g/cm)	1.15	1.03									
Sampling Date	2/26/97	5/13/97									
Sampled by											
Submitted by											
Analysis Date	2/26/97	5/14/97									
pH at time of sampling	5.60	7.00									
pH at time of analysis											
pH used in Calculations	5.60	7.00									

PETROLITE

Water Analysis Report from Petrolite Corporation

Mixes at 80°F and 0 psi

Predictions of Saturation Index and Amount of Scale in lb/1000bbl										
Mix Waters		CO2	Calcite CaCO3		Gypsum CaSO4.2H2O		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4	
17936	17937	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
14%	86%	0.31	0.25	6.67	-0.83		-0.87		N/A		N/A	

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: CO2 Pressure is absolute pressure. Total Pressure is gauge pressure.

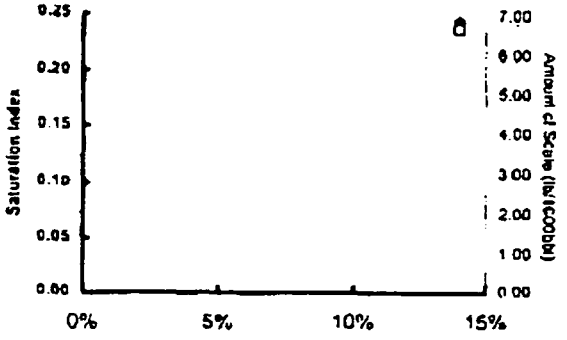
PETROLITE

Petrolite Corporation's Scale Predictions for Mixtures

17936 with 17937 at 80°F and 0 psi

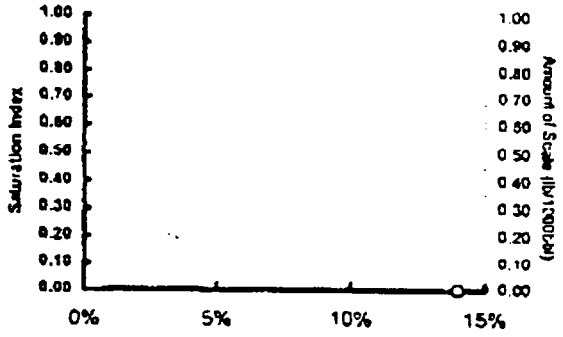
Note: Ranges of scale axes vary from graph to graph

Calcite - CaCO3



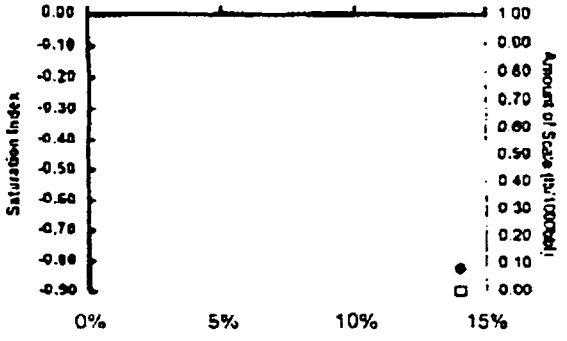
17936

Barite - BaSO4



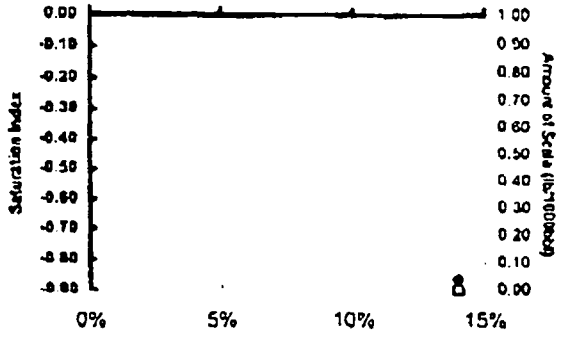
17936

Gypsum - CaSO4.2H2O



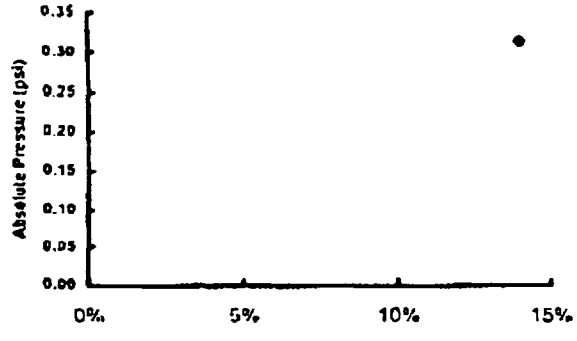
17936

Anhydrite - CaSO4



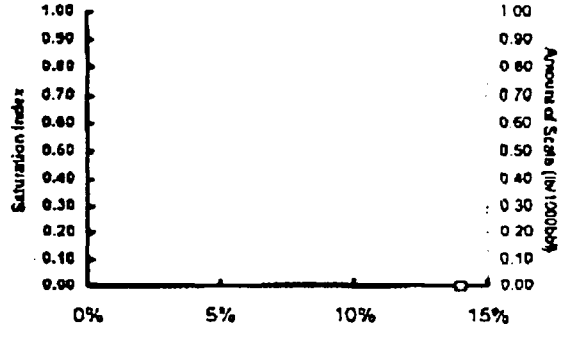
17936

Carbon Dioxide Partial Pressure



17936

Celestite - SrSO4



17936

PETROLITE

Water Analysis Report from Petrolite Corporation

Mixes at 100°F and 0 psi

Predictions of Saturation Index and Amount of Scale in lb/1000bbl										
Mix Waters		CO2	Calcite CaCO3		Gypsum CaSO4.2H2O		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4	
17936	17937	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
14%	86%	0.40	0.34	9.52	-0.86		-0.83		N/A		N/A	

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: CO2 Pressure is absolute pressure. Total Pressure is gauge pressure.

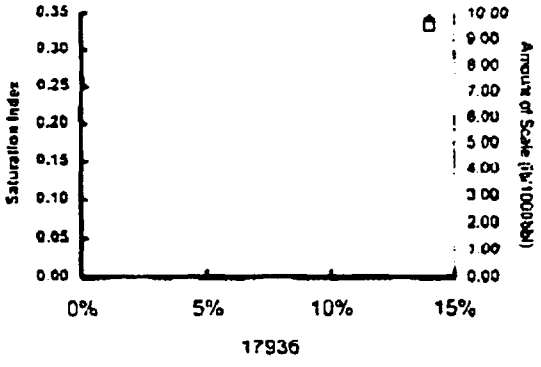
PETROLITE

Petrolite Corporation's Scale Predictions for Mixtures

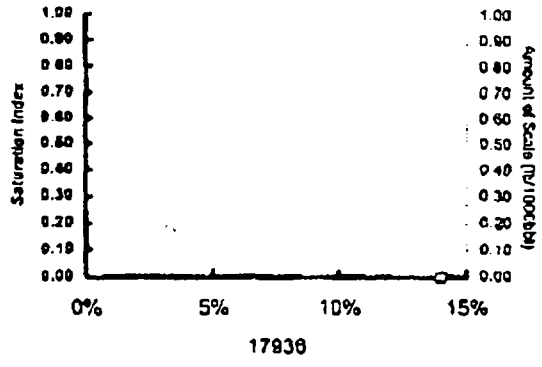
17936 with 17937 at 100°F and 0 psi

Note: Ranges of scale axes vary from graph to graph.

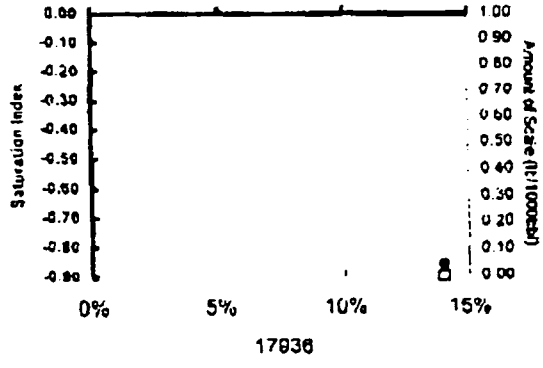
Calcite - CaCO3



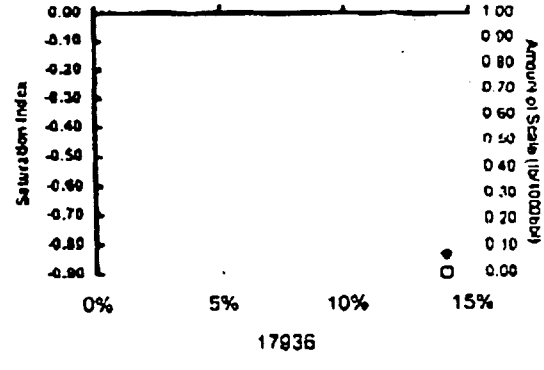
Barite - BaSO4



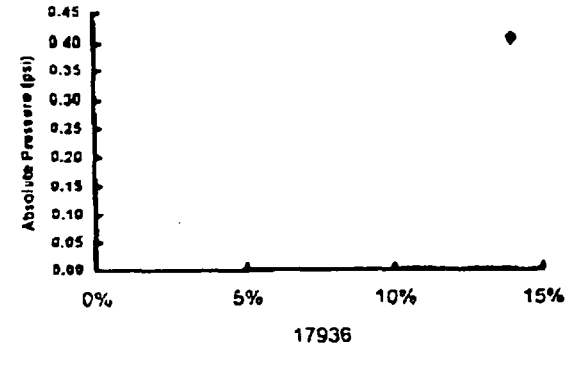
Gypsum - CaSO4.2H2O



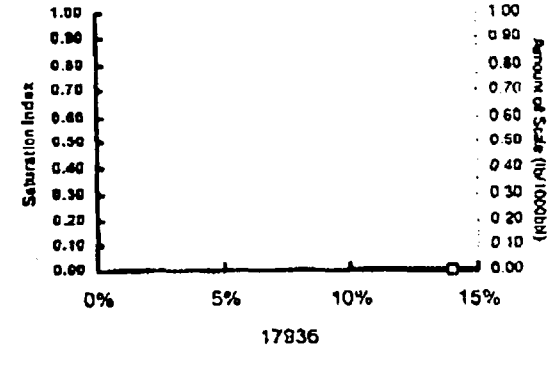
Anhydrite - CaSO4



Carbon Dioxide Partial Pressure



Celestite - SrSO4



PETROLITE

Water Analysis Report from Petrolite Corporation

Mixes at 120°F and 0 psi

Predictions of Saturation Index and Amount of Scale in lb/1000bbl										
Mix Waters		CO2	Calcite CaCO3		Gypsum CaSO4.2H2O		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4	
17936	17937	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
14%	86%	0.50	0.44	12.5	-0.88		-0.78		N/A		N/A	

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: CO2 Pressure is absolute pressure. Total Pressure is gauge pressure.

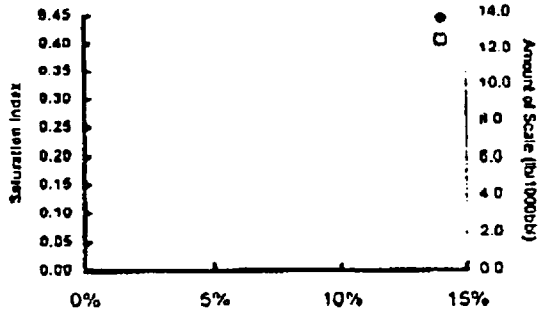
[redacted]

Petrolite Corporation's Scale Predictions for Mixtures

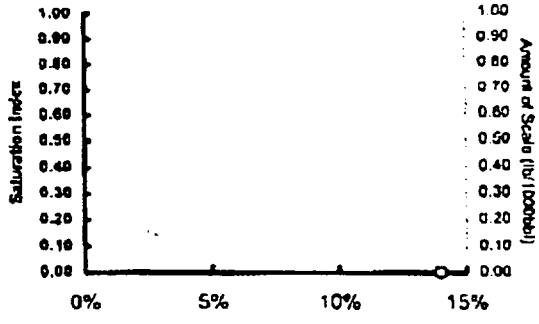
17936 with 17937 at 120°F and 0 psi

Note: Ranges of scale may vary from graph to graph.

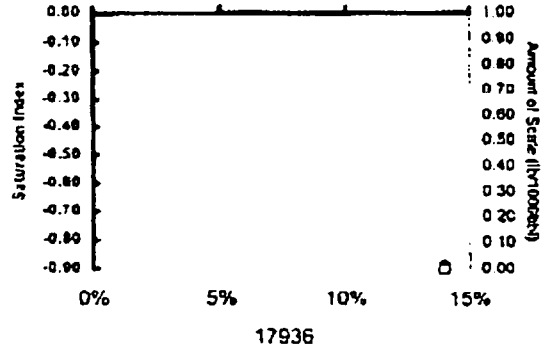
Calcite - CaCO3



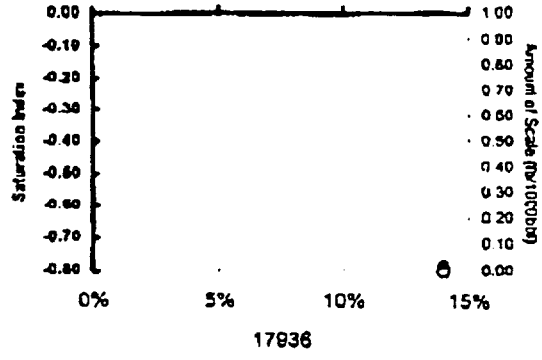
Barite - BaSO4



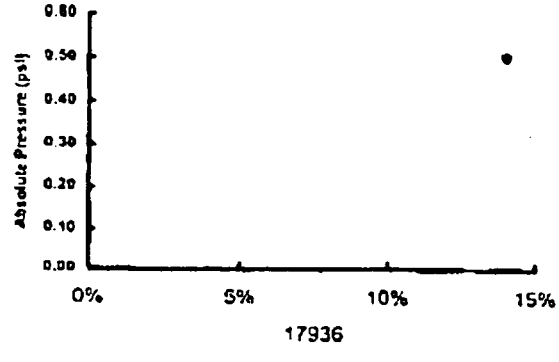
Gypsum - CaSO4.2H2O



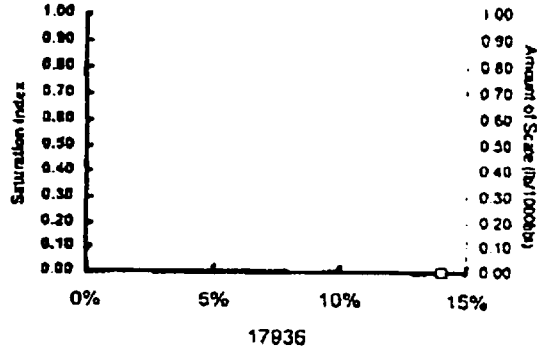
Anhydrite - CaSO4



Carbon Dioxide Partial Pressure



Celestite - SrSO4



PETROLITE

Water Analysis Report from Petrolite Corporation

Mixes at 140°F and 0 psi

Predictions of Saturation Index and Amount of Scale in lb/1000bbl										
Mix Waters		CO2	Calcite CaCO3		Gypsum CaSO4.2H2O		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4	
17936	17937	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
14%	86%	0.60	0.54	15.7	-0.90		-0.70		N/A		N/A	

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: CO2 Pressure is absolute pressure. Total Pressure is gauge pressure.

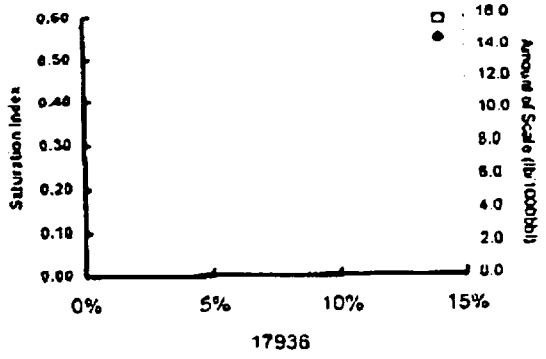
PETROLITE

Petrolite Corporation's Scale Predictions for Mixtures

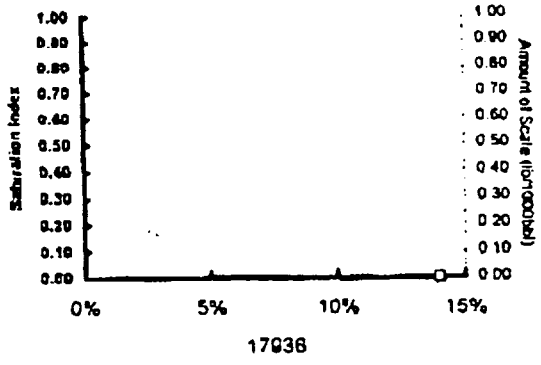
17936 with 17937 at 140°F and 0 psi

Note: Ranges of scale axes vary from graph to graph

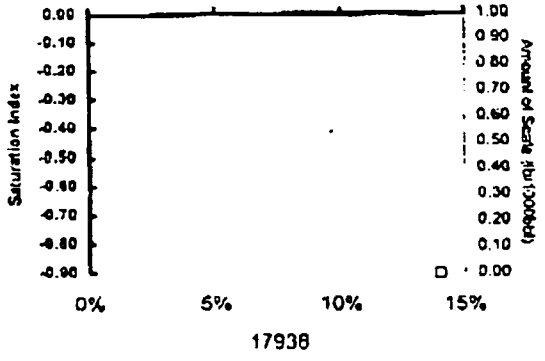
Calcite - CaCO3



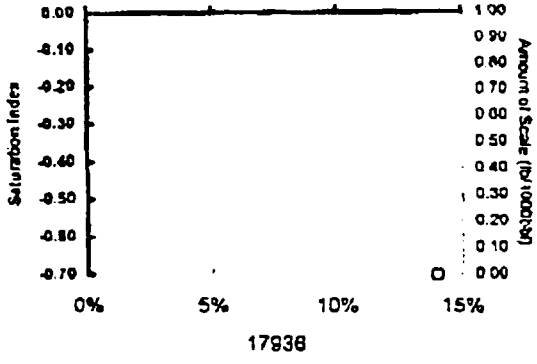
Barite - BaSO4



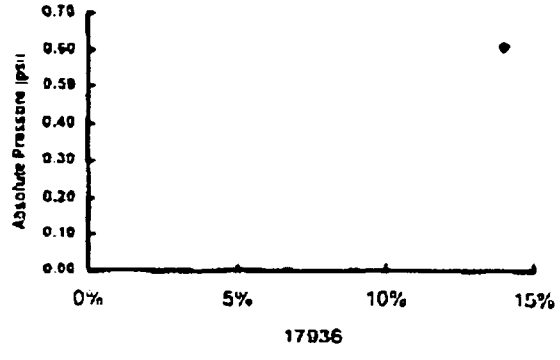
Gypsum - CaSO4.2H2O



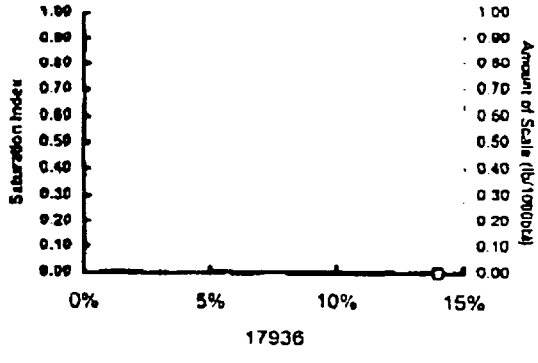
Anhydrite - CaSO4



Carbon Dioxide Partial Pressure



Celestite - SrSO4



PETROLITE

Petrolite Corporation
422 West Main Street
Artesia, NM 88210-2041

TRETOLITE DIVISION

(505) 746-3588
Fax (505) 746-3580

Reply to:
P.O. Box 1140
Artesia, NM
88211-1140

WATER ANALYSIS REPORT

Company	: COASTAL MANAGEMENT	Date	: 05/14/97
Address	: BURTON FLATS	Date Sampled	: 05/13/97
Lease	: PARKWAY DELAWARE	Analysis No.	: 001
Well	: J.C. WILLIAMS SOURCE Exx Federal #1 WSW		
Sample Pt.	: WELLHEAD		

	ANALYSIS		mg/L		* meq/L
1.	pH	7.0			
2.	H2S	0 PPM			
3.	Specific Gravity	1.025			
4.	Total Dissolved Solids		38444.0		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	195.0	HCO3	3.2
12.	Chloride	Cl	23430.0	Cl	660.9
13.	Sulfate	SO4	175.0	SO4	3.6
14.	Calcium	Ca	1500.0	Ca	74.9
15.	Magnesium	Mg	548.0	Mg	45.1
16.	Sodium (calculated)	Na	12594.8	Na	547.8
17.	Iron	Fe	1.3		
18.	Barium	Ba	NR		
19.	Strontium	Sr	NR		
20.	Total Hardness (CaCO3)		6002.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter

75	*Ca <----- *HCO3	3
	/------->	
45	*Mg -----> *SO4	4
	<---------/	
548	*Na -----> *Cl	661

Saturation Values Dist. Water 20 C

CaCO3	13 mg/L
CaSO4 * 2H2O	2090 mg/L
BaSO4	2.4 mg/L

Compound	Equiv wt	X meq/L	= mg/L
Ca(HCO3)2	81.0	3.2	259
CaSO4	68.1	3.6	248
CaCl2	55.5	68.0	3774
Mg(HCO3)2	73.2		
MgSO4	60.2		
MgCl2	47.6	45.1	2146
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	547.8	32016

REMARKS:

Petrolite Oilfield Chemicals Group

Respectfully submitted,
TATE LAIR

SCALE TENDENCY REPORT

Company	: COASTAL MANAGEMENT	Date	: 05/14/97
Address	: BURTON FLATS	Date Sampled	: 05/13/97
Lease	: PARKWAY DELAWARE	Analysis No.	: 001
Well	: J.C. WILLIAMS SOURCE	Analyst	: TATE LAIR
Sample Pt.	: WELLHEAD Exx Fed.#1 wsw		

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO3 Scaling Tendency

S.I. = 0.2 at 60 deg. F or 16 deg. C
S.I. = 0.2 at 80 deg. F or 27 deg. C
S.I. = 0.3 at 100 deg. F or 38 deg. C
S.I. = 0.4 at 120 deg. F or 49 deg. C
S.I. = 0.4 at 140 deg. F or 60 deg. C

****

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS
(Skillman-McDonald-Stiff Method)
Calcium Sulfate

S = 3093 at 60 deg. F or 16 deg C
S = 3288 at 80 deg. F or 27 deg C
S = 3393 at 100 deg. F or 38 deg C
S = 3421 at 120 deg. F or 49 deg C
S = 3431 at 140 deg. F or 60 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
TATE LAIR

PETROLITE