

MAY 3 1996

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☒ no
- II. Operator: Siete Oil & Gas Corporation
Address: P. O. Box 2523 Roswell, NM 88202-2523
Contact party: Robert Lee LOBBIE GOODLOW (Ass.) Phone: (505) 622-2202
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☒ yes ☐ no
If yes, give the Division order number authorizing the project R-9822.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
- I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- Name: Robert Lee Title Production Manager
Signature: Robert Lee Date: 5/2/96
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

III. WELL DATA

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

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

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

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

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

XIV. PROOF OF NOTICE

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

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

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

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

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

CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS

Operator: SITE O&G CORP Well: PARTWAY DELAWARE UNIT No. 303
Contact: ROBERT LEE Title: ENG. Phone: 505 622 2202
DATE IN 5.3 RELEASE DATE 5.20 DATE OUT 6.3.96

Proposed Injection Application is for: ☒ **WATERFLOOD** ☒ Expansion ☐ Initial

Original Order: R- 9822 ☐ Secondary Recovery ☐ Pressure Maintenance

☒ **SENSITIVE AREAS** ☐ **SALT WATER DISPOSAL** ☐ Commercial Well

☐ WIPP ☐ Capitan Reef

Data is complete for proposed well(s)? YES Additional Data Req'd NO

AREA of REVIEW WELLS

53 Total # of AOR 3 # of Plugged Wells
413 Tabulation Complete 465 Schematics of P & A's
915 Cement Tops Adequate NO AOR Repair Required

INJECTION FORMATION

Injection Formation(s) DELAWARE Compatible Analysis 915

Source of Water or Injectate AREA PRODUCTION

PROOF of NOTICE

415 Copy of Legal Notice 465 Information Printed Correctly
465 Correct Operators 465 Copies of Certified Mail Receipts
20 Objection Received ☐ Set to Hearing ☐ Date

NOTES: _____

APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL? 465

COMMUNICATION WITH CONTACT PERSON:

1st Contact:	<input type="checkbox"/> Telephoned	<input type="checkbox"/> Letter	<input type="checkbox"/> Date	Nature of Discussion
2nd Contact:	<input type="checkbox"/> Telephoned	<input type="checkbox"/> Letter	<input type="checkbox"/> Date	Nature of Discussion
3rd Contact:	<input type="checkbox"/> Telephoned	<input type="checkbox"/> Letter	<input type="checkbox"/> Date	Nature of Discussion

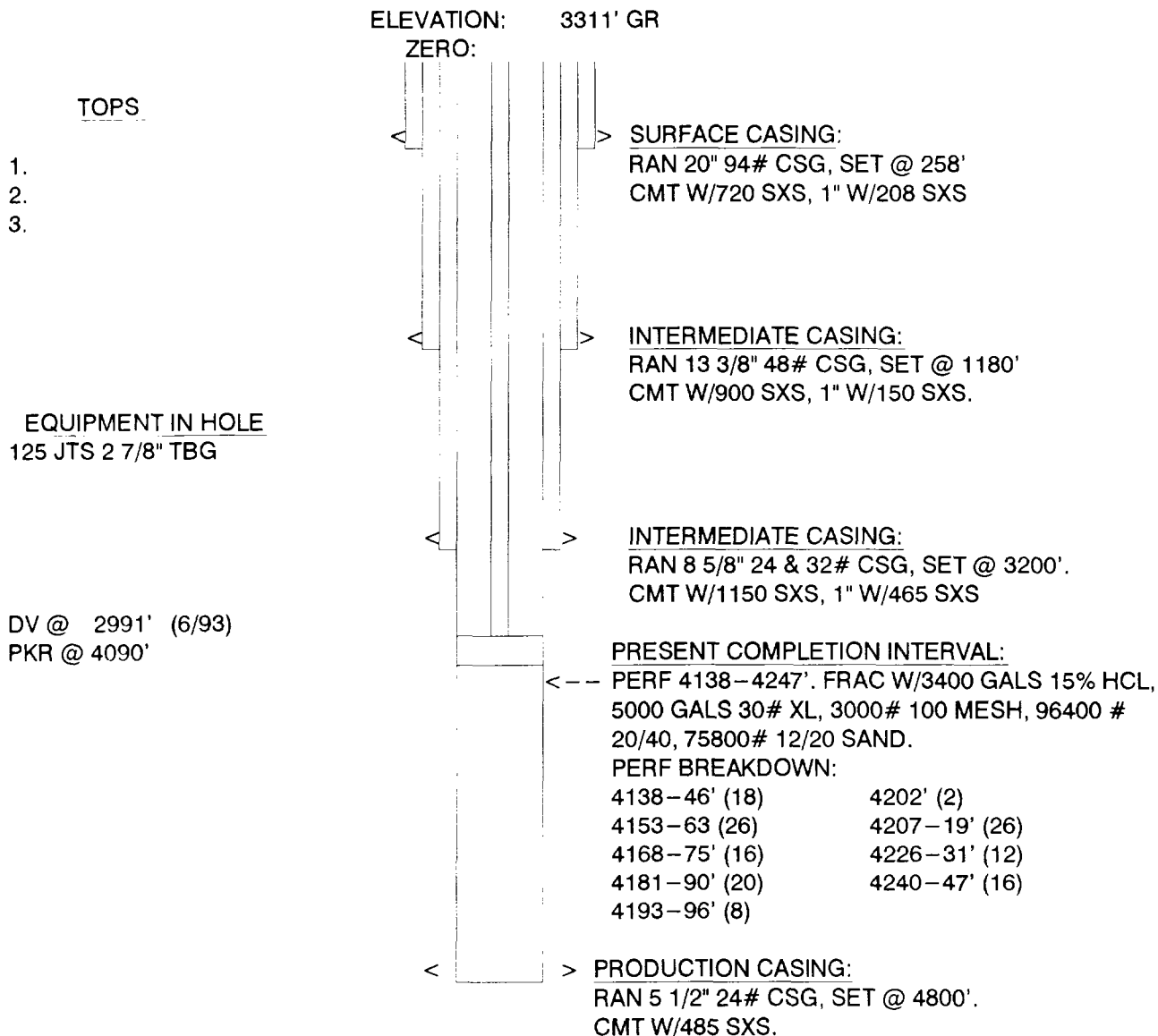
SIETE OIL & GAS CORPORATION

WELL: PARKWAY DELAWARE UNIT #303
FIELD: PARKWAY
INTERVAL: DELAWARE **INJECTION WELL**
Comp: 6/10/93
IP: 198 BOPD, 605 MCFPD, 70 BWPD
Spudded: 5/17/93

LOCATION:
1420 FNL & 2500' FWL
SEC 35 T19S R29E
EDDY COUNTY, NM

API #: 30-015-27445

BOTTOM HOLE LOCATION 1334' FN & 2450' FE



DRAWN BY: BJG

TD: 4756.12'
PBTD: 4729.2'

PARKWAY WATERFLOOD UNIT

PDU 303 - CONVERT TO INJECTION

NMOCD Form C-108 Section III

III. Data on injection well(s)

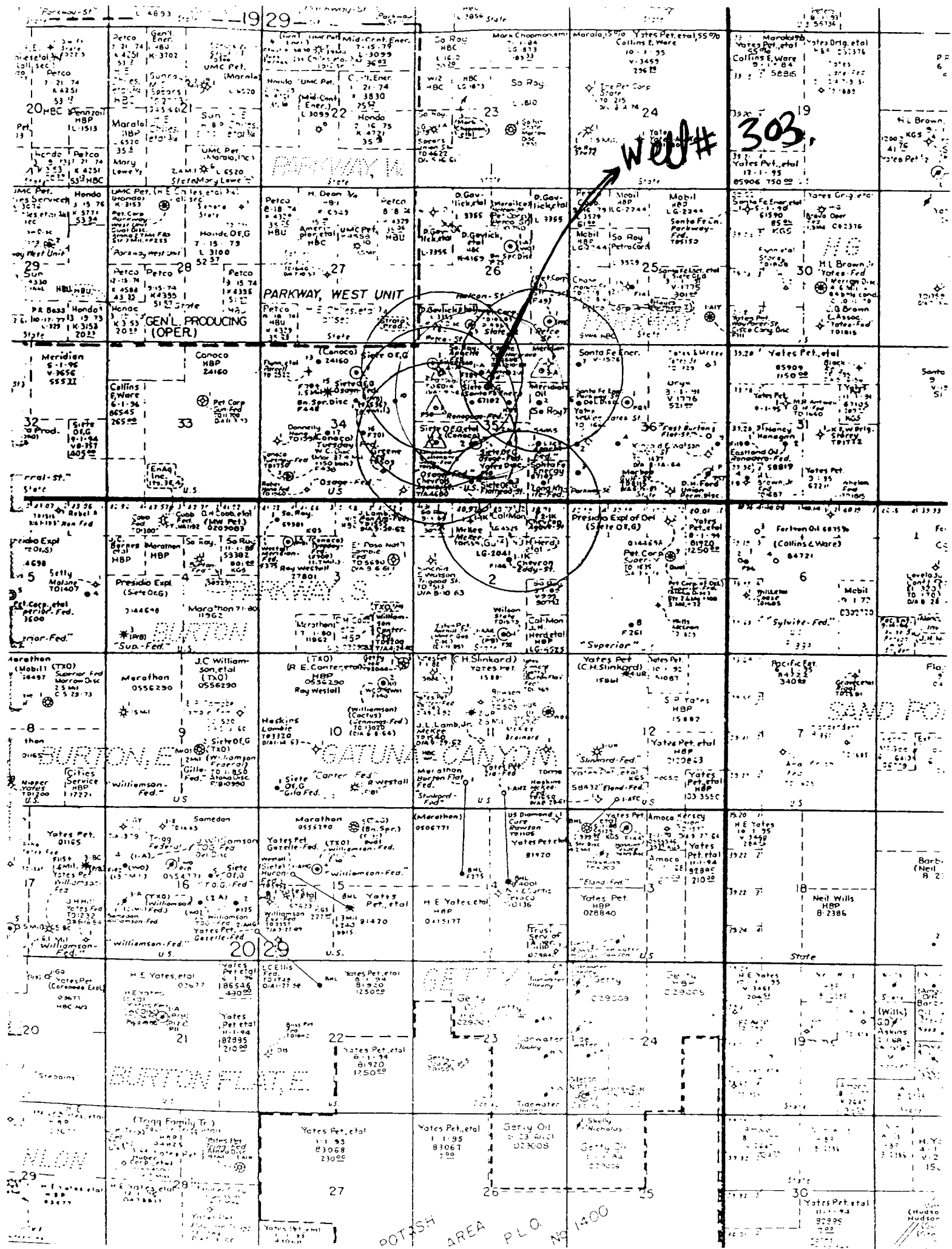
A. Injection well information (see attached schematic)

Tabular data

1. Lease: Renegade
Well No: 303
Location: 1420' FNL & 2500' FWL, Sec 35 T18S
R29E, Eddy County, NM
2. Casing: 20" surface @ 258', circ cement to
surface.
13 3/8" intermediate @ 1180', circ
cement to surface.
8 5/8" intermediate @ 3200', circ cement
to surface.
5 1/2" production @ 4800', TOC @ 1956'
based on CBL.
3. Injection tubing: + or - 125 jts 2 3/8", 4.7 lb/ft,
J-55 internally plastic coated tubing.
4. Packer: Baker Model AD-1 injection packer set @
4090'.

B. Other well information

1. Injection formation: Delaware
Field: Parkway
2. Existing perforations: 4138-46', 4153-63', 4168-
75', 4181-90', 4193-96', 4202', 4207-19', 4226-31'.
3. This well was originally drilled as an injection
well, but was produced for a period of time.
4. There are no other perfed or tested intervals in
this well.
5. Within the area of this project the Yates formation
is marginally productive at a depth of 1440'.



The map displays a complex network of oil fields and wells. Key features include:

- Oil Fields:** Labeled fields include Palo Verde, Palo Verde West, Palo Verde East, Palo Verde North, and Palo Verde South. Other fields shown are Palo Verde West, Palo Verde East, Palo Verde North, and Palo Verde South.
- Wells:** Numerous wells are marked with symbols and labels, such as 'Palo Verde 1', 'Palo Verde 2', 'Palo Verde 3', etc.
- Geological Features:** The map shows various geological formations and structures, including faults and folds.
- Towns and Roads:** Towns like Palo Verde, Palo Verde West, Palo Verde East, Palo Verde North, and Palo Verde South are indicated. Roads and highways are also shown.
- Legend:** A legend in the top left corner defines the symbols used for oil fields, wells, roads, and rivers.
- Grid System:** The map uses a grid system for location reference, with letters A through J across the top and numbers 1 through 30 down the right side.

PARKWAY WATERFLOOD

STATUS	WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD	PBTD	COMP. INTERVAL	FORM.	CASING PROGRAM
ACTIVE	RENEGADE FED #3	SIETE	35E 19S 29E 2230 FN & 760 FW	OIL	11/15/88	1/26/89	5000'	4298'	4127-4142'	DELA	13 3/8" @ 363' W/700 SXS 8 5/8" @ 3202' W/1790 SXS 5 1/2" @ 5000' W/450 SXS
ACTIVE	RENEGADE FED #1	SIETE	35F 19S 29E 1980 FN & 1980 FW	OIL	9/16/88	10/22/88	5800'	5752'	3940-4058'	DELA	13 3/8" @ 357' W/665 SXS 5 1/2" @ 5795' W/2915 SXS
ACTIVE	RENEGADE FED #2	SIETE	35G 19S 29E 1980 FN & 1980 FE	OIL	11/16/88	12/3/88	5000'	4958'	4190-4211'	DELA	13 3/8" @ 365' W/500 SXS 8 5/8" @ 3201' W/790 SXS 5 1/2" @ 5000' W/350 SXS
ACTIVE	APACHE FED #2	MERIDIAN	35H 19S 29E 1980 FN & 990 FE	OIL	3/9/89	4/18/89	4549'	4492'	4176-4210'	DELA	13 3/8" @ 344' W/625 SXS 8 5/8" @ 3200' W/2300 SXS 5 1/2" @ 4500' W/650 SXS
ACTIVE	APACHE FED #1	MERIDIAN	35I 19S 29E 1980 FS & 990 FE	OIL	12/12/88	2/1/89	4500'	4453'	4182-4218'	DELA	13 3/8" @ 365' W/805 SXS 8 5/8" @ 3200' W/2300 SXS 5 1/2" @ 4500' W/650 SXS
ACTIVE	OSAGE FED #1	SIETE	35J 19S 29E 1980 FS & 1980 FE	OIL	7/18/88	8/12/88	5910'	5648'	4135-4168'	DELA	13 3/8" @ 353' W/350 SXS 8 5/8" @ 3193' W/2860 SXS 5 1/2" @ 5908' W/620 SXS
ACTIVE	OSAGE FED #2	SIETE	35K 19S 29E 1980 FS & 1980 FW	OIL	10/2/88	10/24/88	5000'	4948'	4157-4187'	DELA	13 3/8" @ 363' W/740 SXS 5 1/2" @ 4993' W/1550 SXS
T & A	OSAGE FED #7	SIETE	35K 19S 29E 1980 FS & 2080 FW	OIL	1/25/89	2/18/89	1705'	1668'	1434-1449'	YATES	13 3/8" @ 350' W/400 SXS 5 1/2" @ 1700' W/410 SXS
ACTIVE	OSAGE FED #5	SIETE	35L 19S 29E 1980 FS & 760 FW	OIL	11/30/88	1/10/89	5000'	4958'	4135-4150'	DELA	20" @ 173' W/200 SXS 13 3/8" @ 364' W/500 SXS 8 5/8" @ 3200' W/800 SXS 5 1/2" @ 5000' W/450 SXS
ACTIVE	OSAGE FED #4	SIETE	35N 19S 29E 660 FS & 1980 FW	OIL	12/1/88	12/30/88	5000'	4948'	4018-4120'	DELA	13 3/8" @ 381' W/400 SXS 8 5/8" @ 3200' W/1405 SXS 5 1/2" @ 5000' W/420 SXS
ACTIVE	OSAGE FED #3	SIETE	35O 19S 29E 660 FS & 1980 FW	OIL	11/2/88	11/22/88	5000'	4933'	4201-4222'	DELA	13 3/8" @ 360' W/755 SXS 8 5/8" @ 3218' W/2295 SXS 5 1/2" @ 5000' W/400 SXS
ACTIVE	LONGKNIFE 35 #1	SANTA FE	35P 19S 29E 660 FS & 810 FE	OIL	12/13/88	3/1/89	6000'	5980'	5930-5936'	DELA	10 3/4" @ 370' W/350 SXS 7" @ 3200' W/100 SXS 4 1/2" @ 4850' W/450 SXS

PARKWAY WATERFLOOD

STATUS	WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD	PBTD	COMP. INTERVAL	FORM.	CASING PROGRAM
ACTIVE	PARKWAY 36 #7	SANTA FE	360 19S 29E 660 FN & 330 FW	OIL	9/14/89	12/1/89	4850'	4694'	4216-4390'	DELA	11 3/4" @ 370' W/500 SXS 7" @ 3200' W/2717' SXS 4 1/2" @ 4850' W/450 SXS
ACTIVE	PARKWAY 36 #6	SANTA FE	36E 19S 29E 1980 FN & 330 FW	OIL	5/11/89	9/4/89	4790'	4464'	4360-4512'	DELA	11 3/4" @ 406' W/750 SXS 7" @ 3184' W/2235 SXS 4 1/2" @ 4790' W/580 SXS
ACTIVE	PARKWAY 36 #1	SANTA FE	36E 19S 29E 1980 FN & 1980 FW	OIL	12/3/86	3/7/87	12100'	3902'	3649-3661'	CHERRY CANYON	13 3/8" w 324' W/575 SXS 8 5/8" @ 3260' W/4935 SXS 5 1/2" @ 3993' W/385 SXS
ACTIVE	PARKWAY 36 #9	SANTA FE	36L 19S 29E 1980 FS & 330 FE	OIL	11/16/89	12/31/89	4660'	4617'	3747-3875'	DELA	20" 2 3/70' W/450 SXS 10 3/4" @ 1332' W/880 SXS 7" @ 3210' W/670 SXS 4 1/2" @ 4660' W/380 SXS
ACTIVE	PARKWAY 36 #4	SANTA FE	36K 19S 29E 1980 FS & 1650 FW	OIL	7/26/89	9/22/89	5000'	4403'	4266-4326'	DELA	11 3/4" @ 366' W/260 SXS 7" @ 3187' W/4612 SXS 4 1/2" @ 5000' W/580 SXS
ACTIVE	PARKWAY 36 #2	SANTA FE	36L 19S 29E 1980 FS & 330 FW	OIL	3/10/89	5/3/89	5000'	4903'	4006-4237'	DELA	11 3/4" @ 415' W/795 SXS 7" @ 3200' W/3835 SXS 4 1/2" @ 4980' W/700 SXS
ACTIVE	PARKWAY 36 #3	SANTA FE	36M 19S 29E 990 FS & 330 FW	OIL	5/2/89	7/17/89	5000'	4350'	4261-4327'	DELA	11 3/4" w 365' W/715 SXS 7" @ 3185' W/2135 SXS 4 1/2" @ 5000' S/580 SXS
INACTIVE	AGAVE IK ST #1	CHEVRON	2C 20S 29E 330 FN & 2310 FW	OIL	8/29/89	7/18/89	4600'	3665'	3747-4458'	DELA	20" @ 450' W/1125 SXS 13 3/8" @ 1159' W/1350 SXS 8 5/8" @ 3670' W/1600 SXS LNR 5 1/2" @ 3350-4600 W/250 S
ACTIVE	EDDY IK ST #1	CHEVRON	2G 20S 29E 1980 FN & 1980 FE	OIL	9/17/89	10/29/89	10850'	6250'	6058-6104'	BS	30" @ 40' CIRC CMT. 20" @ 450 W/1300 SXS 13 3/8" @ 1165' W/1140 SXS 8 5/8" @ 3510' W/1400 SXS 5 1/2" @ 6250' W/1060 SXS
ACTIVE	MERIDIAN #1	WESTALL	3D 20S 29E 660 FN & 660 FW	OIL	10/31/89	6/2/90	9500'	8070'	7930-8177'	BS	16" @ 265 2/280 SXS 11 3/4" @ 1454' W/720 SXS 8 5/8" @ 3212' W/1500 SXS 5 1/2" @ 8275' W/728 SXS

PARKWAY WATERFLOOD

STATUS	WELL NAME	OPERATOR	LOCATION	TYPE	SPUD DATE	COMP. DATE	TD	PBTD	COMP. INTERVAL	FORM.	CASING PROGRAM
ACTIVE	STATE 25 COM #1	SOUTHLAND ROYALTY	25K 19S 29E 1980 FS & 2130' FW	OIL	8/21/79	2/11/80	12040'	11295	10564 - 732'	STRAWN	11 3/4" @ 412' W/400 SXS 8 5/8" @ 4000' W/1500 SXS 4 1/2" @ 12040' W/1085 SXS
ACTIVE	HALCON ST #1	STRATA	26G 19S 29E 1980' FN & 1980' FE	OIL	8/21/88	8/30/88		8372'	8088 - 8248'	BS	11 3/4" @ 365' W/350 SXS 8 5/8" @ 3135' W/3200 SXS 5 1/2" @ 8412' W/500 SXS
ACTIVE	PETCO ST COM #3	STRATA	26N 19S 29E 330 FS & 1980 FW	OIL	12/6/89	1/17/90	4740'	NA	4316 - 4458'	DELA	13 3/8" @ 358' W/350 SXS 8 5/8" @ 3325' W/2930 SXS 5 1/2" @ 4740' W/300 SXS
P & A	PETCO ST COM #2	PETCO	26N 19S 29E 660 FS & 1980 FW	OIL	5/24/71	7/4/71	10685'	9651'	9622 - 9646'	WOLF	11 3/4" @ 605 W/600 SXS 8 5/8" @ 3800' W/700 SXS 4 1/2" @ 9779' W/360 SXS
ACTIVE	HALCON ST #2	STRATA	26O 19S 29E 330 FS & 1980 FE	OIL	6/27/89	8/15/89	4730	4535'	4244 - 4258'	DELA	13 3/8" @ 357' W/350 SXS 8 5/8" @ 3285' W/300 SXS 5 1/2" @ 4730' W/250 SXS
ACTIVE	PETCO ST COM #1	PETCO	26P 19S 29E 760 FS & 660 FE	OIL	8/26/70	2/9/89	11880'	9000'	10655 - 659'	STRAWN	11 3/4" @ 600' W/600 SXS 8 5/8" @ 4090 W/600 SXS 5 1/2" @ 10844' W/400 SXS
ACTIVE	OSAGE FED #9	SIETE	34B 19S 29E 990 FS & 1980 FE	OIL	8/3/89	9/9/89	9400'	9358'	9256 - 9281'	WOLF	20" @ 343' W/615 SXS 13 3/8" @ 1141' W/1000 SXS 8 5/8" @ 3200' W/1050 SXS 5 1/2" @ 9400' W/700 SXS
ACTIVE	OSAGE FED #13	SIETE	34C 19S 29E 660 FN & 1980 FW	OIL	11/3/89	12/20/89	9400'	7200'	5595 - 5623'	BS	20" @ 344' W/660 SXS 13 3/8" @ 1141' W/1000 SXS 8 5/8" @ 3169' W/650 SXS 5 1/2" @ 9400' W/1685 SXS
ACTIVE	OSAGE FED #15	SIETE	34E 19S 29E 1650 FN & 2310 FW	OIL	1/16/90	2/3/90	8300'	8261'	5650 - 5623'	BS	20" @ 360' W/400 SXS 13 3/8" @ 1120' W/1000 SXS 8 5/8" @ 3200' W/750 SXS 5 1/2" @ 8300' W/1120 SXS
ACTIVE	OSAGE FED #8	SIETE	34G 19S 29E 1980 FN & 1980 FE	OIL	4/18/89	6/15/89	11900	11856'	5343 - 5256'	DELA	20" @ 340' W/635 SXS 8 5/8" @ 3200' W/750 SXS 5 1/2" @ 11900 W/2450 SXS

PARKWAY WATERFLOOD

STATUS	WELL NAME	OPERATOR	LOCATION	TYPE OF WELL	SPUD DATE	COMP. DATE	TD	PBTD	COMP. INTERVAL	FORM.	CASING PROGRAM
ACTIVE	OSAGE FED #10	SIETE	34H 19S 29E 1980 FN & 1980 FE	OIL	9/15/89	11/17/89	9500'	7239'	7034-7192'	BS	20" @ 347' W/510 SXS 13 3/8" @ 1150' W/750 SXS 8 5/8" @ 3200' W/175 SXS 5 1/2" @ 9500' W/1300 SXS
ACTIVE	OSAGE FED #16	SIETE	34J 19S 29E 2310' FS & 1750' FE	OIL	2/10/90	3/28/90	8300'	8256'	7002-7072'	BS	20" @ 358' W/775 SXS 13 3/8" @ 1150' W/800 SXS 8 5/8" @ 3200' W/1350 SXS 5 1/2" @ 8300' W/925 SXS
ACTIVE	OSAGE FED #17	SIETE	34K 19S 29E 2310 FS & 2310 FW	OIL	11/12/90	1/20/91	9500'	8200'	6974-6991'	BS	20" @ 366' W/800 SXS 13 3/8" @ 1120' W/750 SXS 8 5/8" @ 3200' W/1400 SXS 5 1/2" @ 8243' W/990 SXS
ACTIVE	APACHE A FED #3	MERIDIAN	35A 19S 29E 890FN & 990 FE	OIL	3/22/89	4/12/89	4550'	4501'	4221-4239'	DELA	13 3/8" @ 359' W/955 SXS 8 5/8" @ 3200' W/1885 SXS 5 1/2" @ 4549' W/400 SXS
ACTIVE	APACHE A FED #2	MERIDIAN	35B 19S 29E 990 FN & 1980 FE	OIL	4/3/89	4/22/89	4550'	4504'	4136-4229'	DELA	13 3/8" @ 365' W/378 SXS 8 5/8" @ 3210' W/2300 SXS 5 1/2" @ 4550' W/500 SXS
ACTIVE	APACHE A FED #1	MERIDIAN	35C 19S 29E 990 FN & 2310 FW	OIL	4/13/89	6/16/89	4550'	4546'	3949-4264'	DELA	13 3/8" @ 372' W/725 SXS 8 5/8" @ 3200' W/2700 SXS 5 1/2" @ 4550' W/540 SXS
ACTIVE	APACHE A FED #4	MERIDIAN	35D 19S 29E 990 FN & 940 FW	OIL	7/13/89	8/16/89	4550'	4505'	4295-4461'	DELA	13 3/8" @ 353' W/465 SXS 8 5/8" @ 3200' W/4145 SXS 5 1/2" @ 4550' W/425 SXS
ACTIVE	TUESDAY A FED #1	WESTALL	3E 20S 29E 1400 FN & 990 FW	OIL	4/28/86	7/10/86	11700	9613'	9310-9378'	BS	16" @ 300' W/505 SXS 9 5/8" @ 3230' W/2365 SXS 7" @ 9613' W/1360 SXS
ACTIVE	WAYFARER A ST #1	YATES	25P 19S 29E 990 FS & 660 FE	OIL	2/28/91	6/23/91	12140'	10640'	10387-10394'	CISCO CANYON	20" @ 370' W/1000 SXS 13 3/8" @ 1372' W/1400 SXS 8 5/8" @ 3482' W/2250 SXS 5 1/2" @ 12140' W/2125 SXS
ACTIVE	PARKWAY WEST UNIT #10	UMC PET	27G 19S 29E 1980 FN & 1980 FE	OIL	11/23/91	2/10/92	11670'	11580'	11087-11466	MORROW	11 3/4" @ 330' W/350 SXS 8 5/8" @ 3116' W/1960 SXS 4 1/2" @ 11670' W/1020 SXS

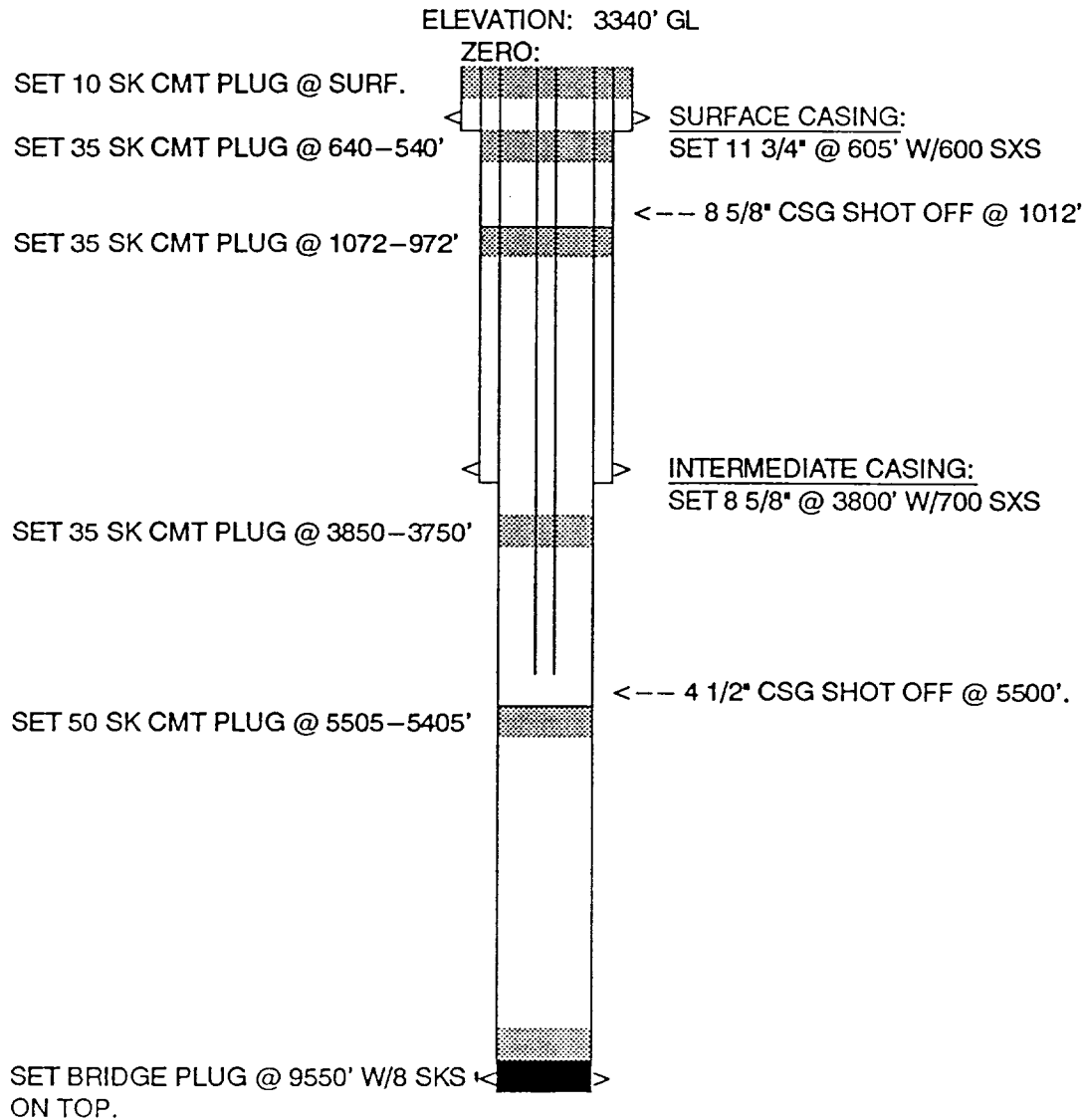
PARKWAY WATERFLOOD

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

THE PETROLEUM CORPORATION

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

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



DRAWN BY: BJG

TD: 10685
PBD: 9651'

NO. OF COPIES RECEIVED	3
DISTRIBUTION	
SANTA FE	1
FILE	1
U.S.G.S.	
LAND OFFICE	
OPERATOR	

RECEIVED
NEW MEXICO OIL CONSERVATION COMMISSION

FEB 24 1972

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

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

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

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

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

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

Loaded hole w/gel mud.

Set bridge plug at 9550' & dump 8 sxs. cement on top.

3. **Shot 4-1/2" casing at 5500' & pulled 5500' of 4-1/2" casing.**

Set 50 sack cement plug 5505 to 5405 feet.

Set 35 sack cement plug 3850 to 3750 feet.

6. **Shot 8 5/8" casing at 1012 feet and pulled 1012 feet of 8-5/8" casing.**

Set 35 sack cement plug 1072 to 972 feet.

3. **Set 35 sack cement plug 640 to 540 feet.**

9. **Set 10 sack cement plug at surface.**

4. **Installed 4 inch marker 2-14-72**

Prepare to clean up location -- will advise when ready for inspection.

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

SIGNATURE *Sally C. Shaw* TITLE Petroleum Engineer DATE Feb. 21, 1972

APPROVED BY *Lillian Williams* TITLE OIL AND GAS INSPECTOR DATE JUN 14 1972

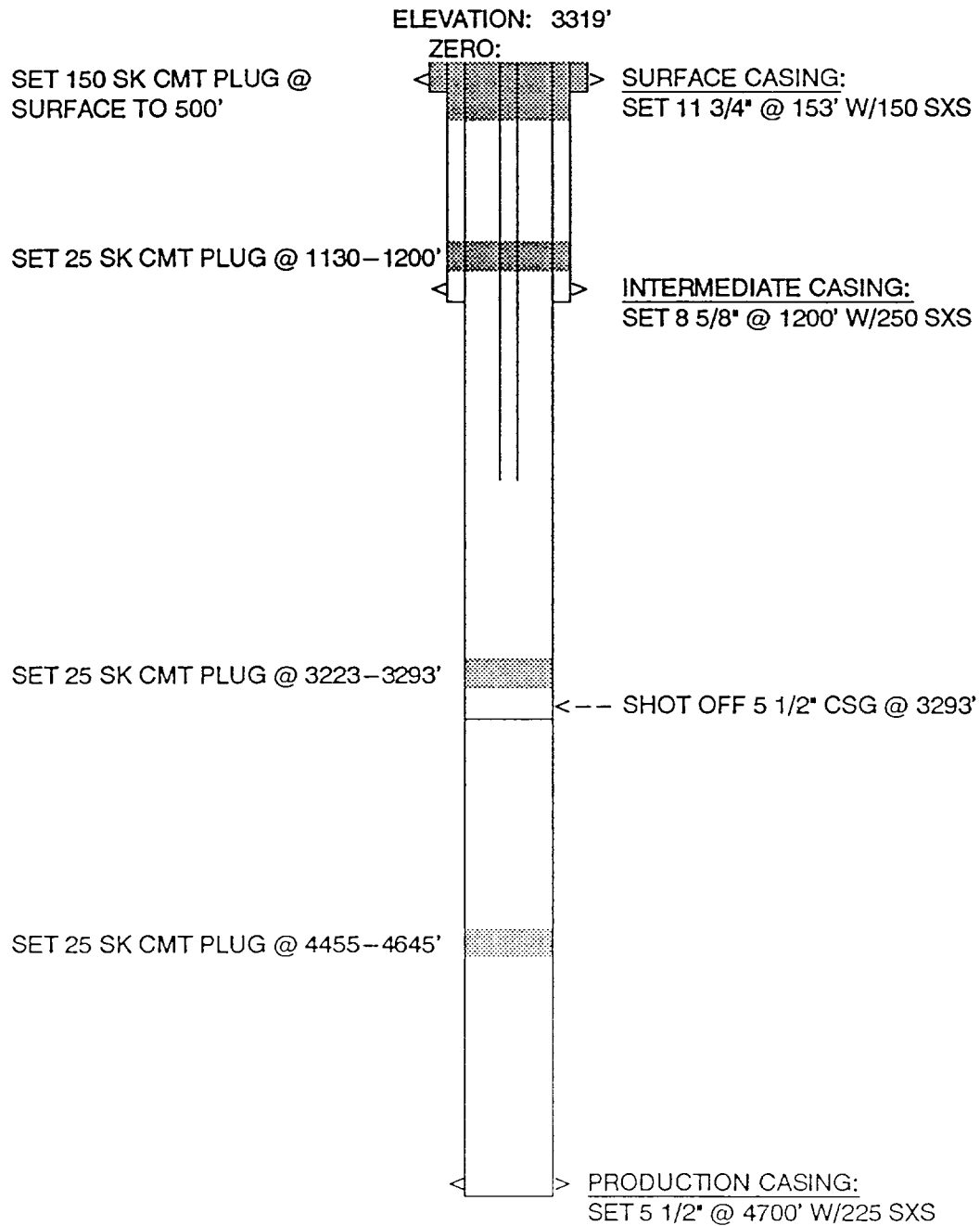
CONDITIONS OF APPROVAL, IF ANY:

SIETE OIL & GAS CORPORATION

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

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

API #:



DRAWN BY: BJG

TD: 6014'

(SUBMIT IN TRIPLICATE)

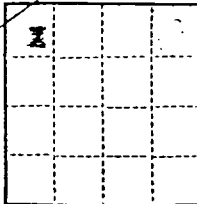
Land Office _____

Lease No. 22-0183-A

Unit _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

JUN 10 PM 2.25



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.....	<input checked="" type="checkbox"/>
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.....	<input checked="" type="checkbox"/>
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, 1956Well No. 1-35 is located 560 ft. from [N] line and 500 ft. from [W] line of sec. 351/4 of Section 35
(1/4 Sec. and Sec. No.)7-10-5
(Twp.)5-23-2
(Range)R.R.P.M.
(Meridian)Willcox
(Field)Yuma
(County or Subdivision)Yuma
(State or Territory)The elevation of the derrick floor above sea level is 309 ft. (D.F.)

DETAILS OF WORK

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

Spotted 25 cu. cement plug 1155-1165'. Shot off 3-1/8" casing at 1191' and recovered 1195' to 3-1/8" casing.

Spotted 25 cu. cement plugs at 1195-1205' and 1130-1200' and 190 cu. cement from surface to 1195'.

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

ILLEGIBLE

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

Company Union Oil Company of CaliforniaAddress 615 West Texas AvenueMidland, Texas

By

R.W. YarnallTitle Assistant Division Engineer

ILLEGIBLE

EDDY WILDCAT STATE N.M. KROENLEIN 2310-56

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

600' FWL & FWL

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

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

TOP
Anhy 195
S/Salt 257
S/Salt 1143
Yates 1335
Dela Sd. 3940
Bone Springs 5690

11-22-55 1-9-56

PCA

TD
TD 601 1/2' Li.
FTD

SW. 100% SW

CONT'D. PAGE 2

EDDY, N.M. SEC: 35-193-29E
Union Oil Co. - #1-35 - Fed Walter

K-23
PAGE 2

Ord. 1527-79 rec. 52'; 10' hard dse dolo, 5-1/2' dolo
fxln stn. on vert frac. 16' dolo shale ptgs. 8-1/2'
sand grey some fluor por bldg. oil, 4' dolo hard
dse NS. 10' lite grey sand, fluor bldg oil.

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

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

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

Took sidewall cores 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 SSG. 4627' fg sd stn, fluor
4629' fg sd sli fluor 4635' fg sd no sho. 4638' fg sd
no sho. 4649' fg w/SSG, 4661' fg sd w/SSG, 4667' fg sd
shaley NS, 4906' fg sd NS.

CONT'D ON PAGE 3

ILLEGIBLE

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

K-2300-56
PAGE 3

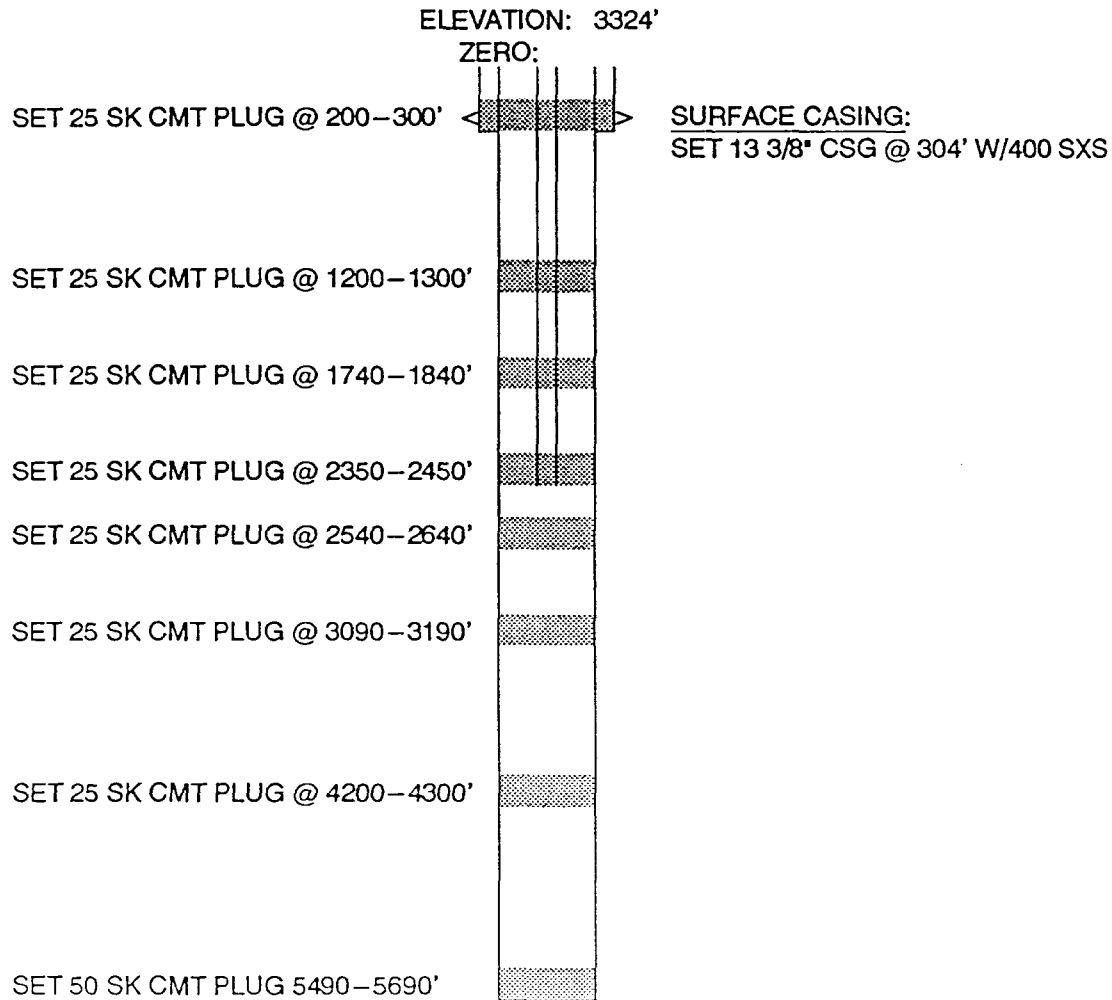
4610-32 pkr failed str pkr.
T 4611-4647 op 1 hr 30 mins rec. 150' s oil & GCW 5 to
10% oil FP 50# SIP 1225# 20 mins.
r 68/4612-29 A/500 MCA, SF 10,000 4612-29 Swb part of
load swb dry.

SIETE OIL & GAS CORPORATION

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

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

API #:



DRAWN BY: BJG

TD: 5690'

WC COUNTY Eddy FIELD Wildcat STATE N.M. NO.

OPR El Paso Natural Gas Co. & Texas Crude Oil Co. MAP

NO 1 LSE Lambie

SEC 3 T. 20S BLK. 29E SUR CO-ORD.

LOC 1980' fr N Line & 660' fr E Line of Sec.

MI. FROM P&A CLASS. EL 3324'

SPUD. 7-24-61 COMP. 9-6-61 FORMATION DATUM FORMATION DATUM

LOG: B Sprgs 5672'

CSG. & SX. 13 3/8" 304' 400

TBG. DEPTH SIZE

LOGS EL GR RA IND HC A

5690' dolo.

PROD. INT. IP DAILY RATE BS&W GH GOR STY C. P. T. P. TESTS

PLUGGED & ABANDONED

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CONT. PROP. DEPTH 14,000' TYPE

DATE F.R. 7-27-61 Devonian

7-31-61 Drlg. 2145' anhy. & dolo.
 8-2-61 Amended proposed depth. was 3500 Bone Springs.
 8-3-61 Drlg. 2590' dolo.
 8-14-61 Drlg. 3750' dolo.
 8-21-61 Drlg. 4456' dolo. & sd.
 8-28-61 Drlg. 5142' dolo.
 9-5-61 TD 5690' dolo., WCO. Ran logs at TD
 9-11-61 TD 5690' dolo., PLUGGED & ABANDONED.
 No tests.

(SUBMIT IN TRIPLICATE)

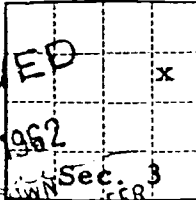
Land Office New MexicoLease No. NM 01062Unit Lambie FederalUNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

T-20-S

R-29-E

APPROVED

JUN 1 1962

A. R. BROWN
ACTING DISTRICT ENGINEER

SUNDRY NOTICES AND REPORTS ON WELLS

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

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

Lambie Federal #1

September 7, 1961

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

DETAILS OF WORK

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

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

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

JAN 30 1962

SEP 14 1961

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

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

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

By

D. E. Lockett

Title Division Petroleum Engineer

WRS COMPLETION REPORTCOMPLETIONS SEC 2 TWP 20S RGE 29E
PI# 30-T-0017 06/21/91 30-015-26170-0000 PAGE 1NMEX EDDY * 330FNL 990FEL SEC NE NE
STATE COUNTY FOOTAGE SPOT
CHEVRON USA D
OPERATOR WELL CLASS INIT FIN
2 AGAVE "IK" STATE
WELL NO. LEASE NAMEPARKWAY
OPER ELEV FIELD/POOL/AREA
API 30-015-26170-0000
LEASE NO. PERMIT OR WELL ID. NO.06/19/1991 ROTARY VERT AB-LOC
SPUD DATE COMP. DATE TYPE TOOL HOLE TYPE STATUS
5300 DELAWARE
PROJ. DEPTH PROJ. FORM CONTRACTOR

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

LOCATION DESCRIPTION

16 MI NE CARLSBAD, NM

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

IC# 300157017289

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CorporationPI-W
Form

SIETE OIL AND GAS CORPORATION

Parkway Waterflood Project

NMOCD Form C-108 Sections VII - XIII

VII. Injection Data

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

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

VIII. * Geologic Data: See Attached Geologic Description

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

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

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

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

GEOLOGY

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

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

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

Delaware C Sand

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Delaware B Sand

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

Delaware A Sand

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

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

Fresh Water Zones

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

By

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

RESULT OF WATER ANALYSES

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

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

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

SECTION _____ BLOCK _____ SURVEY _____ COUNTY Eddy STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Raw water - taken from Eddy, Potash water well.

NO. 2 Amax Lake Water.

NO. 3

NO. 4

Mixed Water System

REMARKS:

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

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks

Letter of recommendation attached.

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

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

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

February 12, 1992

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

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

Dear Mr. Lee:

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

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

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

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

Very truly yours,



Waylan C. Martin

WCM/plm

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

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SURFACE OWNERS:

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Bureau of Land Management
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Roswell, New Mexico 88201-1397

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State of New Mexico
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