

BASS ENTERPRISES PRODUCTION CO.

201 MAIN ST.

FORT WORTH, TEXAS 76102-3131

817/390-8400

APR 25 1996

April 24, 1996

New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87504

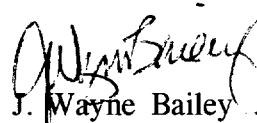
Attention: Mr. Ben Stone

Re: Salt Water Disposal Well Application  
Texaco-Remuda Basin State SWD No. 1  
Section 19, T23S-R30E  
Eddy County, New Mexico

Dear Mr. Stone:

Pursuant to our telephone conversation of April 23, 1996, Bass has objected to Texaco's application for administrative approval to drill the subject well at its current location. Accordingly, please find attached hereto one (1) copy of my letter dated April 23, 1996 in this regard. Texaco and Bass plan to discuss the drilling of the subject well in the near future and you will be advised of the results thereof at our earliest convenience. Thank you very much and should you have any questions or comments in the above regard, please don't hesitate to contact the undersigned at (817)390-8671.

Very truly yours,

  
J. Wayne Bailey

JWB:lab

BASS ENTERPRISES PRODUCTION CO.

201 MAIN ST.

FORT WORTH, TEXAS 76102-3131

817/390-8400

April 23, 1996

**FEDERAL EXPRESS & TELEFAX (303) 793-4055**

Texaco Exploration and Production, Inc.  
4601 DTC Blvd.  
Denver, Colorado 80237

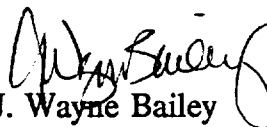
Attn: Mr. David Sleeper

Re: Texaco-Remuda State SWD No. 1  
Section 19 T23S-R30E  
Remuda Basin Prospect  
Eddy County, New Mexico

Dear Mr. Sleeper:

Please be advised that Bass has reviewed Texaco's Notice of Application for Salt Water Disposal Well dated April 9, 1996. This is to inform Texaco that Bass has objections to the location of the subject well due to interference with Bass' proposed Morrow Formation well in the NE/4 SW/4 Section 19, T23S-R30E (Bass-Remuda Basin "19" State No. 1). Please contact the undersigned at your earliest convenience in order to discuss alternative locations for the SWD Well and processing administrative approval thereof. Thank you very much and should you have any questions or comments in the above regard, please advise.

Very truly yours,

  
J. Wayne Bailey

JWB:sd

cc: W. Frank McCreight  
John Smitherman  
George Hillis

Texaco Exploration and Production, Inc.  
205 E. Bender Blvd.  
Hobbs, NM 88240  
Attn: Michael C. Alexander



RECEIVED

SWD 4-29-96

APR 15 1996

OIL CONSERVATION  
DIVISION  
SANTA FE

April 9, 1996

New Mexico Oil Conservation Division  
2040 South Pacheco  
P.O. Box 6429  
Santa Fe, New Mexico 87505

Attention: David Catanach

**RE: Application for Salt Water Disposal Well**

Remuda Basin State SWD #1  
Bell Canyon Formation  
Unit Letter F, Section 19, T-23-S, R-30-E  
Eddy County, New Mexico

Gentlemen:

Texaco Exploration and Production Inc. respectfully requests administrative approval for the attached C-108 application on its Remuda Basin State SWD # 1 well for the purpose of disposing of produced fluids in the non-commercial Bell Canyon interval. This work will allow Texaco E&P Inc., to eliminate the current disposal costs on the subject lease, and one offsetting lease, of approximately \$1,500/day. The installation of the proposed disposal well will lower the current economic limit on each well and ultimately allow Texaco E & P Inc. to recover additional oil & gas reserves that would otherwise be left in place.

Texaco E&P Inc. respectfully requests that this application be approved administratively, or through an NMOCD sponsored hearing scheduled at the earliest possible time. This is requested so that the necessary operations can be advanced in a prudent manner. If you have any questions concerning the application, please contact me at (505) 397-0419.

Yours very truly,

Michael C. Alexander  
Production Engineer

MCA/  
Attachments  
File  
Chrono

cc: Tim Gum - NMOCD; Artesia, New Mexico

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage  
Application qualifies for administrative approval? ☒ yes ☐ no
- II. Operator: Texaco Exploration & Production Inc.  
Address: P.O. BOX 730, Hobbs, New Mexico 88240  
Contact party: Russell Pool Phone: (505) 397 - 0414
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☐ yes ☒ no  
If yes, give the Division order number authorizing the project \_\_\_\_\_.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- \* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- \* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification

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

Name: Michael C. Alexander Title Production Engineer  
Signature: Michael C. Alexander Date: 04 - 09 - 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.

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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.

## NEW MEXICO OIL CONSERVATION DIVISION - Form C-108

## III. SALT WATER DISPOSAL WELL DATA

Remuda Basin State SWD #1 : Bell Canyon Interval

- Unit Letter F, 2625' FNL & 1500' FWL, Section 19, T-23-S, R-30-E  
Eddy County, New Mexico

All pertinent data for the above proposed salt water disposal well is included on the well schematic sheets in this application.

## V. SUBJECT AREA MAPS AND AREA OF REVIEW

A map of the subject area, Remuda Basin State lease, including all wells within a 2 mile radius is attached. Also attached is a map showing the subject well's area of review (or 1/2 mile radius circle).

## VI. TABULATION OF DATA ON WELLS WITHIN AREA OF REVIEW

Currently, Texaco Exploration & Production Incorporated operates five wells on the subject lease (and two offsetting leases, Remuda basin '19' Fee and the proposed Remuda Basin '19' Federal lease) producing approximately 400 BOPD, 1,500 MCFPD and 1,000 BWPD. The proposed well will be spudded as soon as possible to facilitate water disposal within the Remuda Basin production area. Texaco E&P Inc., is proposing to utilize the proposed SWD well to dispose of produced fluids from all of Texaco's Remuda basin leases and accept additional produced fluids from offsetting operators and dispose of these fluids in the non-commercial Bell Canyon interval. Attached is a schematic of the subject disposal well and its proposed completion and tubing/packer arrangement. Also attached is a schematic and completion report for each well with the area of review.

The intent of this application is to seek approval, either through a NMOCD administrative approval, or through a New Mexico Oil Conservation Commission sponsored hearing to drill the subject well for salt water disposal. This application is pursuant to the continuation of development and production on Texaco's Remuda Basin Leases, which produce from the Cherry Canyon and Brushy Canyon intervals. The approval of this application will enhance Texaco E&P Inc., efforts to operate the subject lease as optimally as possible and increase the reserve potential by lowering the economic limit on each producing well.

## VI. TABULATION OF DATA ON WELLS WITHIN AREA OF REVIEW (continued)

To date, the following wells within a half mile radius of the proposed salt water disposal well injection wells have been plugged and abandoned :

T-23-S, R-29-E

Section 18 : well(s) : None

T-23-S, R-30-E

Section 18 : well(s) : None

Section 19 : well(s) : None

## VII. PROPOSED OPERATION

The proposed completion within the Remuda Basin State SWD #1 wellbore will be in the Bell Canyon interval with an open hole completion between 3,200' and 3,900'. The packer will be placed within approximately 50' to 100' above the casing show above the openhole interval. The tubing will be cement lined or internally plastic coated. The proposed maximum salt water disposal rate is expected to be 5,000 BWPD. The initial disposal rate is expected to be 1,500 BWPD. Maximum injection pressure will not exceed 620 psig (0.2 psi/ft OCD allowable rate) until a step rate test establishes a higher limit. Injected fluids will be produced fluids from the Brushy Canyon and Bone Spring intervals. These zones and the proposed injection interval (Bell Canyon) all contain saline waters with total dissolved solids (TDS) and salinity above 10,000 ppm (mg/l). No current recent chemical analysis of the disposal zone is available within the adjacent area, but produced test samples all had TDS and salinity above 10,000 ppm. The system will be closed.

## VIII. GEOLOGICAL DATA

The injection interval consists of an interbedded, fine to medium grain sorted sandstone reservoir. The saturation within the reservoir show a low oil saturation which is non-mobile making the formation non-commercial. The Bell Canyon interval has a total thickness of approximately 900' within the subject area. It overlays the Cherry Canyon, Brushy Canyon and Bone Spring intervals which are the productive interval within the subject area.

## **VIII. GEOLOGICAL DATA (continued)**

The known sources of fresh water within the subject area exist from approximately 120' to 400' deep in two offsetting windmills each approximately 250' deep. Based on a current geological and engineering data and a petrophysical rock-properties evaluation, there is no evidence of any natural or artificially created open faults within the unitized interval, or above, which would communicate salt water to the shallow fresh water strata. Texaco E&P Inc., has taken all efforts to insure that all mechanical means of isolation were implemented during drilling and they have been and will continue to be maintained within the proposed disposal well.

## **IX. PROPOSED STIMULATION PROGRAM**

The subject wells will be stimulated using 4,000 to 10,000 gallons of 20% NEFE HCl acid. Rock salt blocks or ball sealers will be utilized during the acid job(s). A potential hydraulic frac job will be performed using a 2% KCL crosslinked borate gel carrying 16/30 or 12/20 ottawa sand. The necessity of a frac job and it's appropriate size will be determined after drilling and acidizing is completed.

## **STATEMENT OF SURFACE OWNER AND OFFSET OPERATOR**

**40 ACRE SURFACE OWNER :** STATE OF NEW MEXICO (STATE LAND OFFICE)  
P.O. BOX 1148  
SANTA FE, NEW MEXICO 87504-1148

### **OFFSET OPERATORS OR MINERAL INTEREST LEASEE :**

Strata Producing Company Inc.  
P.O. Box 1030  
Roswell, New Mexico 88202-1030

Murchison Oil & Gas Inc.  
First Interstate Bank Tower,  
Suite 5300  
1445 Ross Avenue  
Dallas, Texas 75202-2733

Bass Enterprises Production Company  
Perry R. Bass, et al,  
201 Main Street  
Ft. Worth, Texas 76102  
Attn : J. Wayne Bailey

BK Exploration Corporation  
810 S. Cinninnati, Suite 208  
Tulsa, Oklahoma 74119  
Attn : Bob Kimmel

**STATEMENT OF SURFACE OWNER AND OFFSET OPERATOR**

**OFFSET OPERATORS OR MINERAL INTEREST LEASEE : (continued)**

Devon Energy Corporation  
20 N. Broadway, Suite 1500  
Oklahoma City, Oklahoma  
Attn: Ken Gray

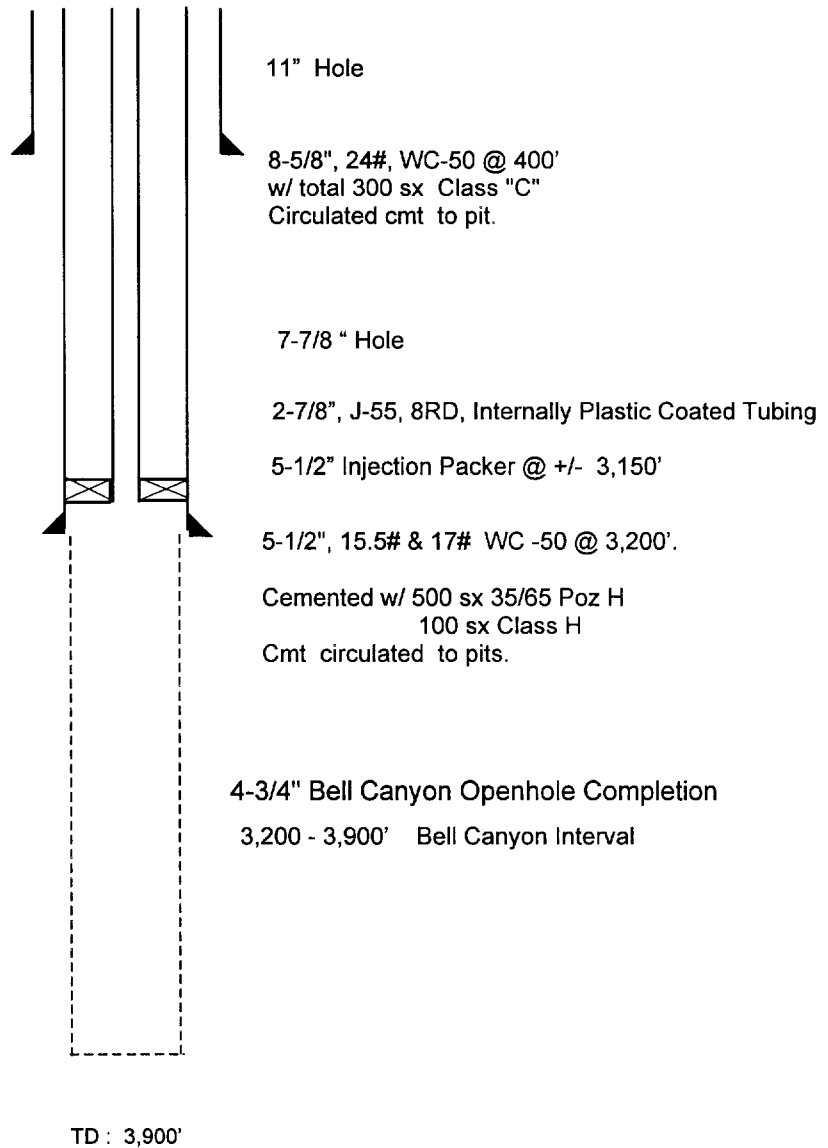
Damar Energy Company  
Diamond Petroleum Group  
1416 J. Avenue  
Plano, Texas 75074

Kieth Norvall  
P.O. Box 5151  
Carlsbad, New Mexico 88221

Southwest Petroleum Corp.  
P.O. Box 25623  
Overland Park, Kansas 66225

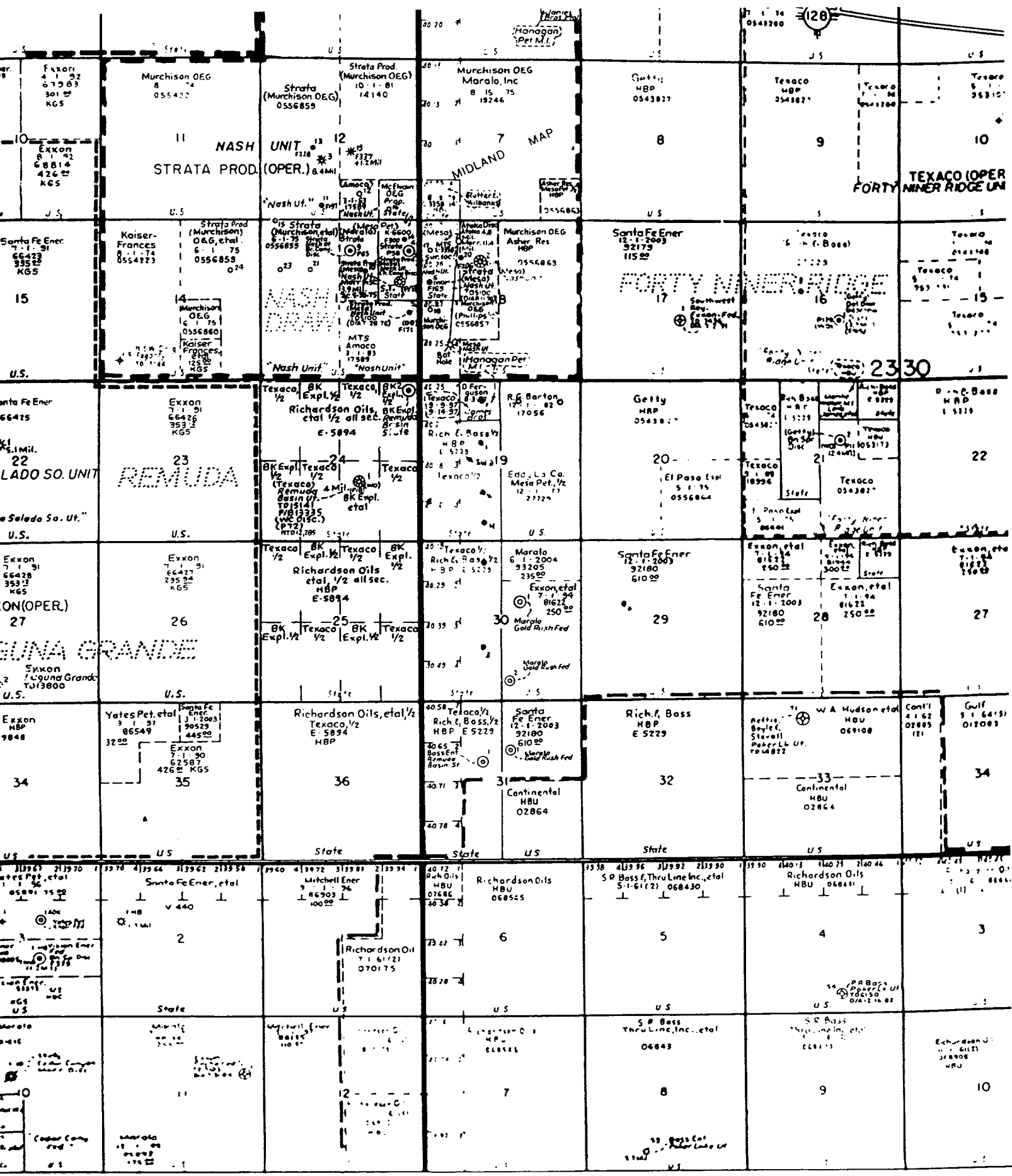
**C-108 APPLICATION**  
**TEXACO EXPLORATION & PRODUCTION INC.**  
**III. PROPOSED DISPOSAL WELL**

Texaco Exploration & Production Inc.  
**Remuda Basin State SWD # 1**  
**Brushy Canyon**  
**Eddy County, New Mexico**  
Unit Letter F, 2,625' FNL, 1,500' FWL, Sec. 19, T-23-S, R-30-E



## REMUDA BASIN LEASES

## V. SUBJECT AREA (TWO MILE RADIUS)



## REMUDA BASIN LEASES

<p>Murchison OEG 8-1-74 055422</p> <p>11 <b>NASH UNIT</b> STRATA PROD. (OPER.)</p> <p>U.S.</p>	<p>Strata Prod (Murchison OEG) 0556859</p> <p>12 F337 F337 F337</p> <p>13 F337 F337 F337</p> <p>14 F337 F337 F337</p> <p>15 F337 F337 F337</p> <p>16 F337 F337 F337</p> <p>17 F337 F337 F337</p> <p>18 F337 F337 F337</p> <p>19 F337 F337 F337</p> <p>20 F337 F337 F337</p> <p>21 F337 F337 F337</p> <p>22 F337 F337 F337</p> <p>23 F337 F337 F337</p> <p>24 F337 F337 F337</p> <p>25 F337 F337 F337</p> <p>26 F337 F337 F337</p> <p>27 F337 F337 F337</p> <p>28 F337 F337 F337</p> <p>29 F337 F337 F337</p> <p>30 F337 F337 F337</p> <p>31 F337 F337 F337</p> <p>32 F337 F337 F337</p> <p>33 F337 F337 F337</p> <p>34 F337 F337 F337</p> <p>35 F337 F337 F337</p> <p>36 F337 F337 F337</p> <p>37 F337 F337 F337</p> <p>38 F337 F337 F337</p> <p>39 F337 F337 F337</p> <p>40 F337 F337 F337</p> <p>41 F337 F337 F337</p> <p>42 F337 F337 F337</p> <p>43 F337 F337 F337</p> <p>44 F337 F337 F337</p> <p>45 F337 F337 F337</p> <p>46 F337 F337 F337</p> <p>47 F337 F337 F337</p> <p>48 F337 F337 F337</p> <p>49 F337 F337 F337</p> <p>50 F337 F337 F337</p> <p>51 F337 F337 F337</p> <p>52 F337 F337 F337</p> <p>53 F337 F337 F337</p> <p>54 F337 F337 F337</p> <p>55 F337 F337 F337</p> <p>56 F337 F337 F337</p> <p>57 F337 F337 F337</p> <p>58 F337 F337 F337</p> <p>59 F337 F337 F337</p> <p>60 F337 F337 F337</p> <p>61 F337 F337 F337</p> <p>62 F337 F337 F337</p> <p>63 F337 F337 F337</p> <p>64 F337 F337 F337</p> <p>65 F337 F337 F337</p> <p>66 F337 F337 F337</p> <p>67 F337 F337 F337</p> <p>68 F337 F337 F337</p> <p>69 F337 F337 F337</p> <p>70 F337 F337 F337</p> <p>71 F337 F337 F337</p> <p>72 F337 F337 F337</p> <p>73 F337 F337 F337</p> <p>74 F337 F337 F337</p> <p>75 F337 F337 F337</p> <p>76 F337 F337 F337</p> <p>77 F337 F337 F337</p> <p>78 F337 F337 F337</p> <p>79 F337 F337 F337</p> <p>80 F337 F337 F337</p> <p>81 F337 F337 F337</p> <p>82 F337 F337 F337</p> <p>83 F337 F337 F337</p> <p>84 F337 F337 F337</p> <p>85 F337 F337 F337</p> <p>86 F337 F337 F337</p> <p>87 F337 F337 F337</p> <p>88 F337 F337 F337</p> <p>89 F337 F337 F337</p> <p>90 F337 F337 F337</p> <p>91 F337 F337 F337</p> <p>92 F337 F337 F337</p> <p>93 F337 F337 F337</p> <p>94 F337 F337 F337</p> <p>95 F337 F337 F337</p> <p>96 F337 F337 F337</p> <p>97 F337 F337 F337</p> <p>98 F337 F337 F337</p> <p>99 F337 F337 F337</p> <p>100 F337 F337 F337</p>	<p>Murchison OEG Marala, Inc 8-15-75 19246</p> <p>7 MAP</p> <p>8 U.S.</p>	<p>Gettly HBP 0543827</p> <p>9 U.S.</p>	<p>Texaco HBP 0543827</p> <p>10 U.S.</p>	<p>Texaco 7-1-74 0543280</p> <p>11 U.S.</p>
<p>Kaiser- frances 1-1-74 554823</p> <p>14 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>15 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>16 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>17 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>18 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>19 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>20 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>21 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>22 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>23 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>24 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>25 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>26 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>27 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>28 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>29 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>30 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>31 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>32 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>33 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>34 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>35 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>36 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-1-74 554823</p> <p>37 Murchison OEG 6-1-75 0556860</p> <p>Kaiser frances 1-</p>					

# **ATTACHMENTS**

- A) DATA ON WELLS IN AREA OF REVIEW**
  - Schematics of offsetting wells**
  
- B) ADDITIONAL INFORMATION**
  - Water Analysis of produced waters**
  
- C) PROOF OF NOTIFICATION TO :**
  - SURFACE OWNER**
  - OFFSET OPERATORS**
  
- D) PROOF OF LEGAL NOTICE**

**A) DATA ON WELLS IN AREA OF REVIEW**  
**- Schematics of offsetting wells**

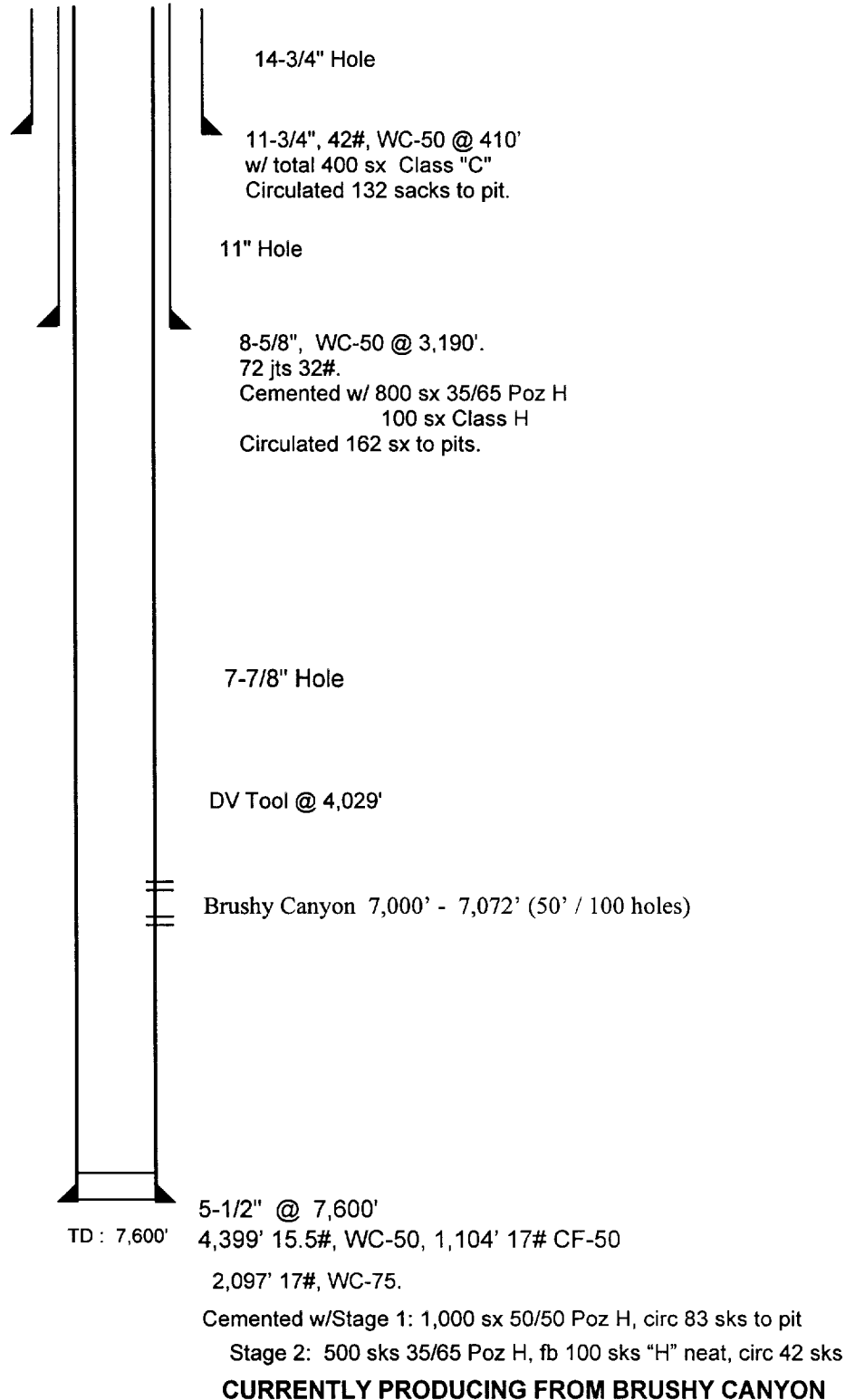
Texaco Exploration & Production Inc.

**Remuda Basin "19" Fee # 1**

**Brushy Canyon**

**Eddy County, New Mexico**

**Unit Letter C , 510' FNL, 2,130' FWL, Sec. 19, T-23-S, R-30-E**



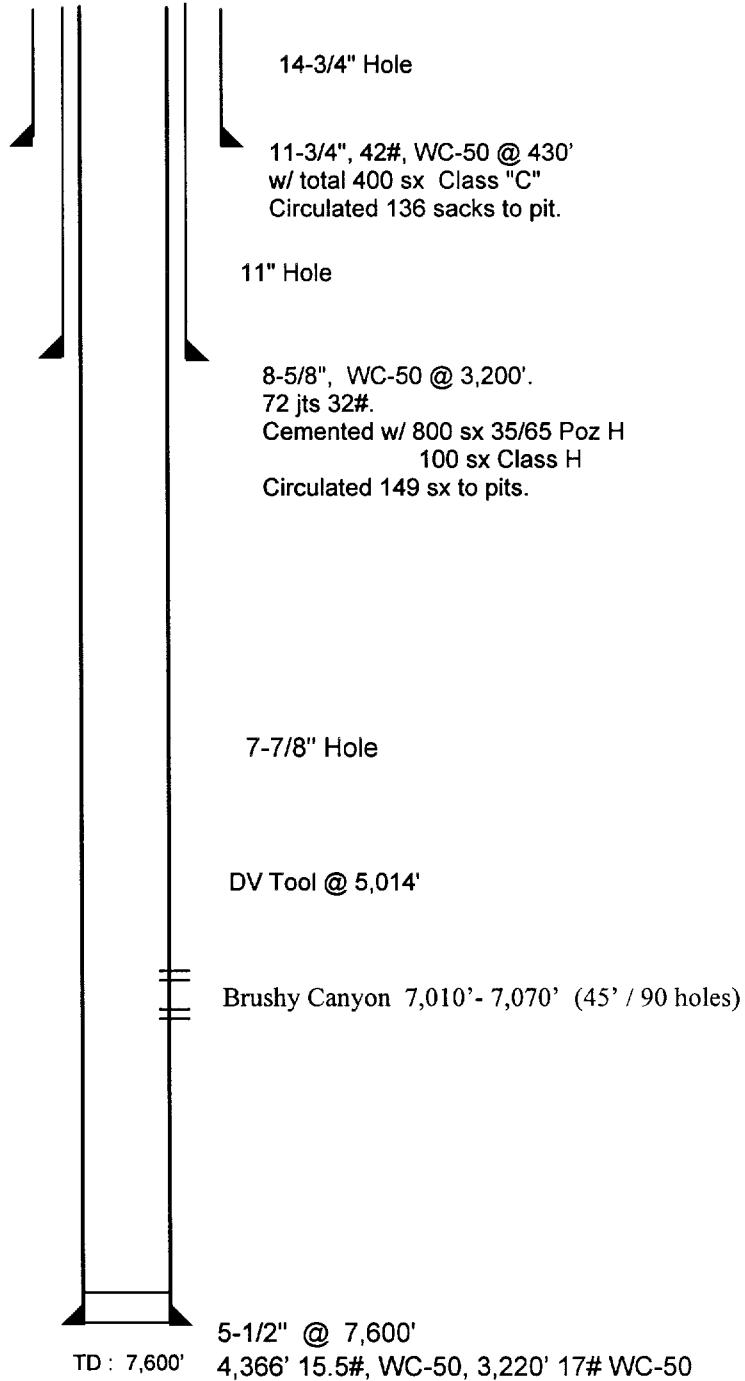
Texaco Exploration & Production Inc.

**Remuda Basin State # 1**

**Brushy Canyon**

**Eddy County, New Mexico**

**Unit Letter F , 1,980' FNL, 1,930' FWL, Sec. 19, T-23-S, R-30-E**



Cemented w/Stage 1: 650 sx 50/50 Poz H

Stage 2: 715 sks 35/65 Poz H, fb 100 sks "H" neat

**CURRENTLY PRODUCING FROM BRUSHY CANYON**

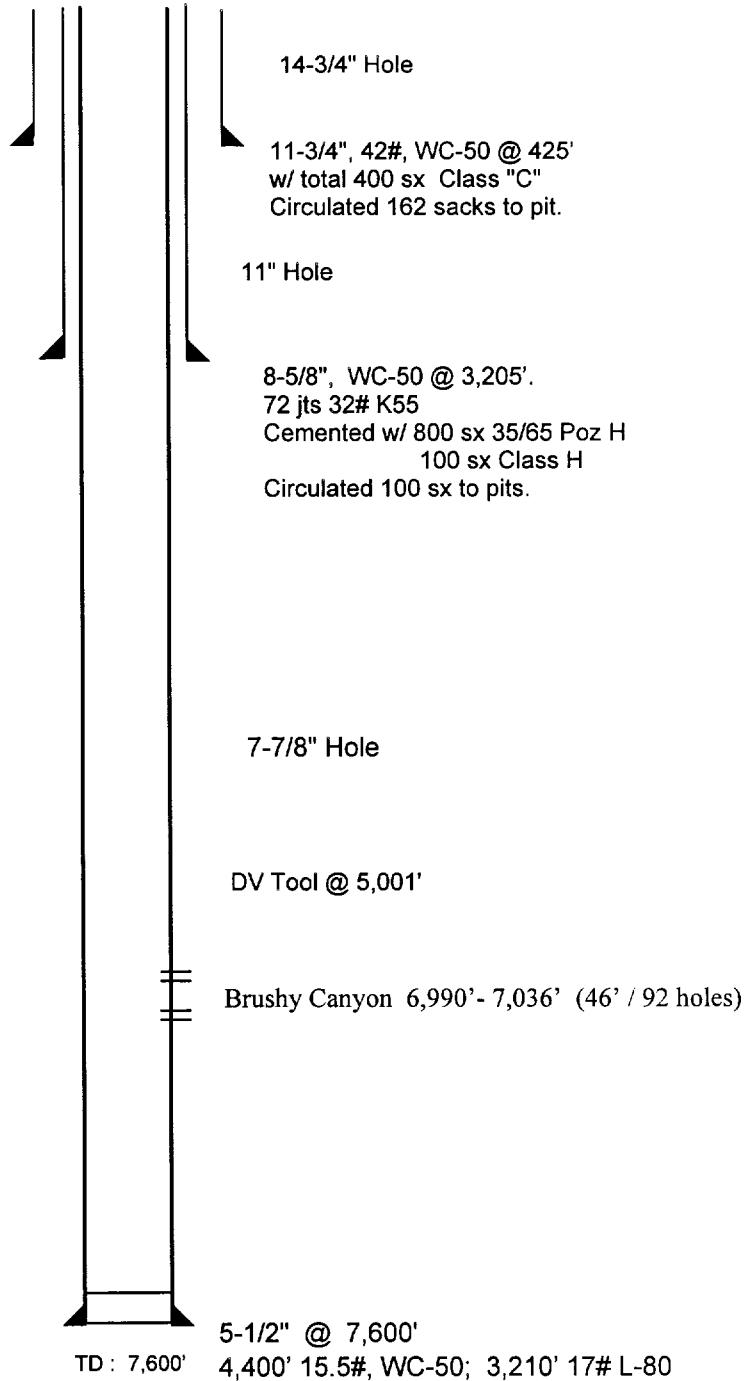
Texaco Exploration & Production Inc.

**Remuda Basin State # 2**

**Brushy Canyon**

**Eddy County, New Mexico**

Unit Letter K , 1,980' FSL, 1,980' FWL, Sec. 19, T-23-S, R-30-E



Cemented w/Stage 1: 600 sx 50/50 Poz H

Stage 2: 680 sks 35/65 Poz H, fb 100 sks "H" neat ; TS est @ 800'

**CURRENTLY PRODUCING FROM BRUSHY CANYON**

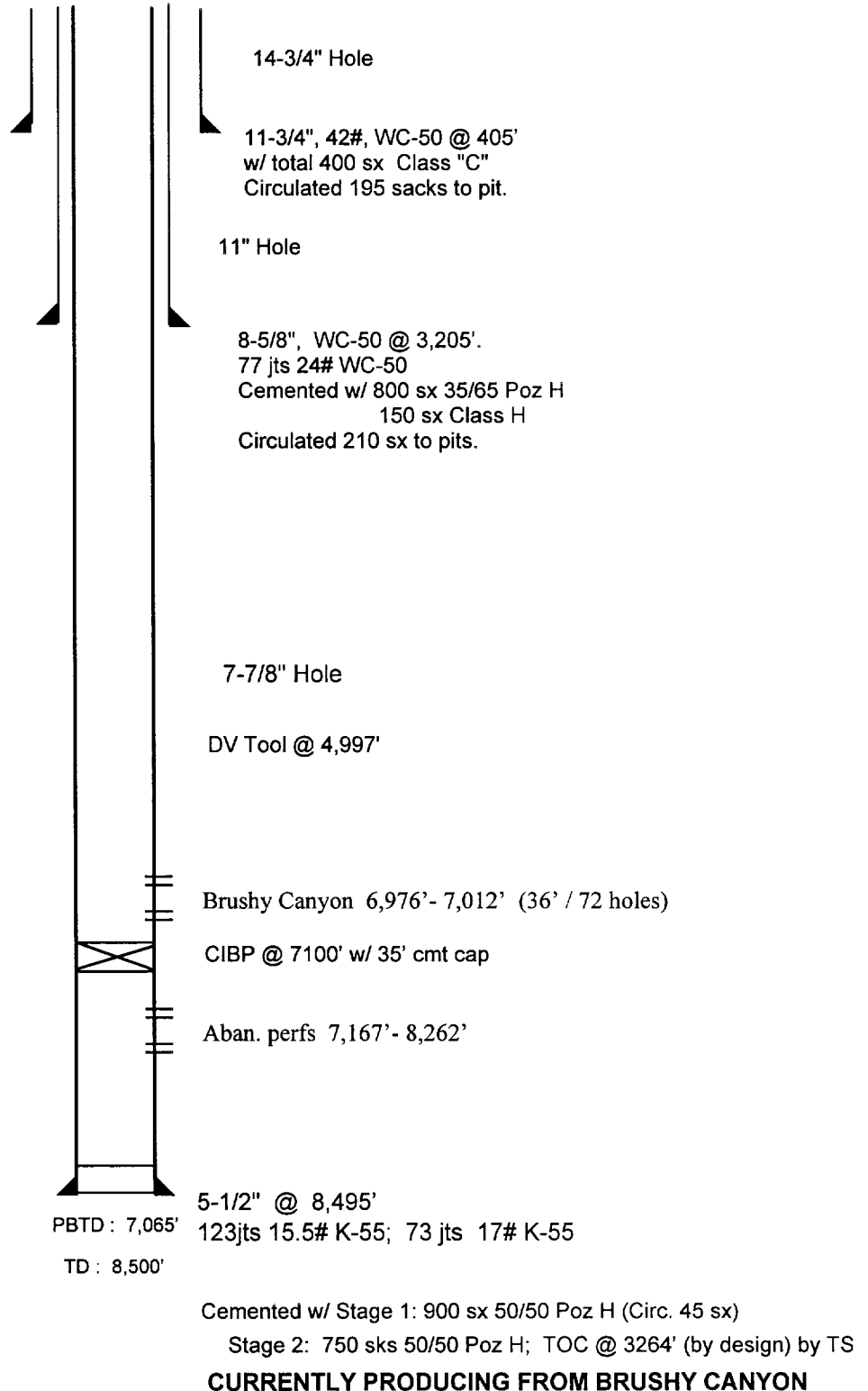
Texaco Exploration & Production Inc.

**Remuda Basin State # 4**

**Brushy Canyon**

**Eddy County, New Mexico**

Unit Letter N , 660' FSL, 1,980' FWL, Sec. 19, T-23-S, R-30-E



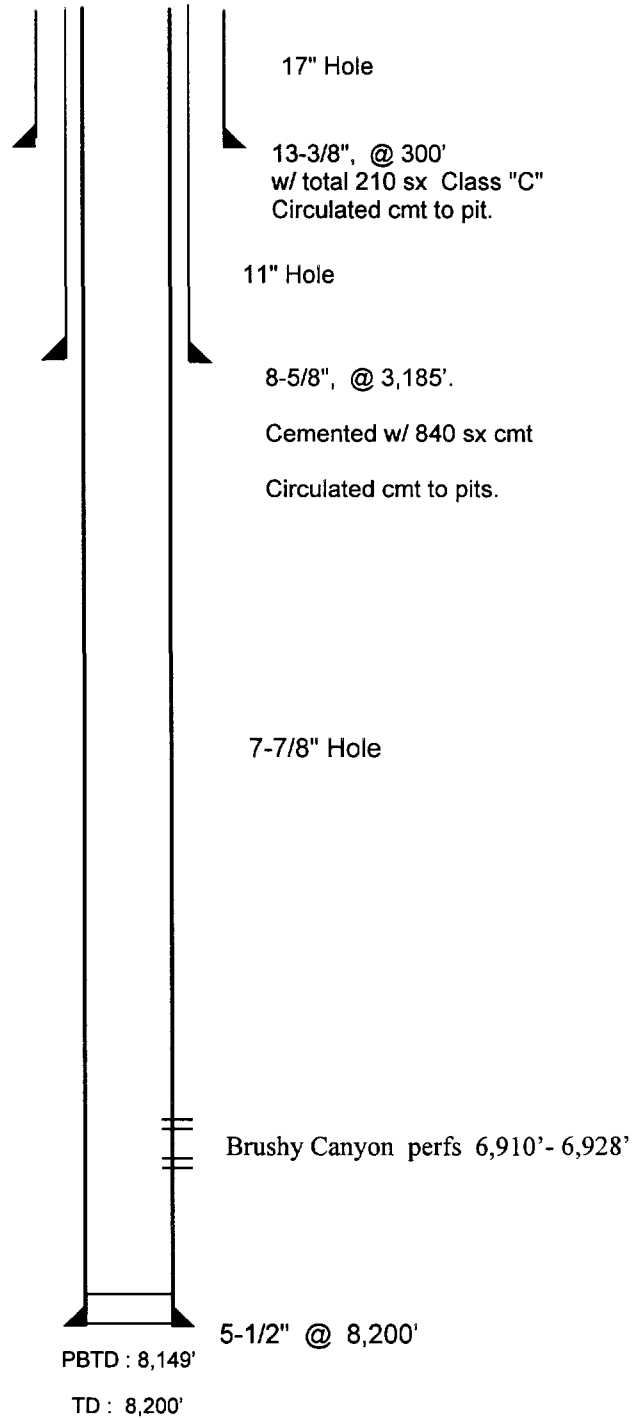
BK Exploration Corporation Inc.

**Remuda Basin '24' # 2**

**Brushy Canyon**

**Eddy County, New Mexico**

Unit Letter A , 330' FNL, 330' FEL, Sec. 24, T-23-S, R-29-E



Cemented w/ Stage 1: 410 sx; TOC @ 6147' by CBL

**CURRENTLY PRODUCING FROM BRUSHY CANYON**

## **B) ADDITIONAL INFORMATION**

- Water Analysis of produced waters**

## CHLORIDES ANALYSIS

Company:	Texaco Carlsbad FMT	Date Sampled:	3/15/96
Location:	Ramuda Basin #3	Salesman:	Isaac Huskey

### Chlorides

123,000 mg/l

If you have any questions or require further information, please don't hesitate to call.

cc: Joe Hay

# UNICHEM

A Division of BJ Services Company

Lab Test No : 6725

Texaco

Sample Date : 8/2/95

Lab Date In : 8/4/95

Lab Date Out : 8/21/95

## Water Analysis

Listed below please find water analysis report from : Remuda Basin "30"

State #3

Specific Gravity : 1.065 —  
Total Dissolved Solids : 91406  
pH : 6.80  
Conductivity (uohms):  
Ionic Strength : 1.642

Cations: mg/l

Calcium	(Ca++):	2000
Magnesium	(Mg++):	405
Sodium	(Na+):	33008
Iron	(Fe++):	317.90
Dissolved Iron	(Fe++):	
Barium	(Ba++):	2.80
Strontium	(Sr):	
Manganese	(Mn++):	4.77
Resistivity :		

Anions:

Bicarbonate	(HCO3-):	659
Carbonate	(CO3--):	0
Hydroxide	(OH-):	0
Sulfate	(SO4--):	334
Chloride	(Cl-):	55000

Gases: ppm

Carbon Dioxide	(CO2):	
Oxygen	(O2):	
Hydrogen Sulfide	(H2S):	

Scale Index (positive value indicates scale tendency) a blank indicates some tests were not run

Temperature	CaCO3 SI	CaSO4 SI
86F 30.0C	0.21	-56.67
104F 40.0C	0.41	-56.67
122F 50.0C	0.67	-55.95
140F 60.0C	1.03	-55.03
168F 70.0C	1.38	-54.40
176F 80.0C	1.74	-53.43

Comments: *Sample was taken to lab without field acid gases. The scale tendency will not be accurate.*

If you have any questions or require further information, please contact us.

Sincerely,

*John Paul Gonzalez*

cc: Isaac Huskey  
Joe Hay

Laboratory Technician

- C) PROOF OF NOTIFICATION TO :**
- SURFACE OWNER**
  - OFFSET OPERATORS**

P 622 713 442

US Postal Service  
Receipt for Certified Mail

Bass Enterprises Prod Co.  
Attn: J. Wayne Bailey  
201 Main Street  
Ft. Worth, TX 76102

Postage	\$	✓
Certified Fee		✓
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		✓
Return Receipt Showing to Whom, Date, & Addressee's Address		
<b>TOTAL Postage &amp; Fees</b>	<b>\$</b>	<b>2.90</b>
Postmark or Date APR 1995		

P 622 713 444

US Postal Service  
Receipt for Certified Mail

Devon Energy Corp.  
Attn: Ken Gray  
20 N. Broadway, Suite 1500  
Oklahoma City, OK

Postage	\$	✓
Certified Fee		✓
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		✓
Return Receipt Showing to Whom, Date, & Addressee's Address		
<b>TOTAL Postage &amp; Fees</b>	<b>\$</b>	<b>2.90</b>
Postmark or Date APR 1995		

P 622 713 441

US Postal Service  
Receipt for Certified Mail

BK Exploration Corp  
Attn: Bob Kimmel  
810 S. Cincinnati, Ste 208  
Tulsa, OK 74119

Postage	\$	✓
Certified Fee		✓
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		✓
Return Receipt Showing to Whom, Date, & Addressee's Address		
<b>TOTAL Postage &amp; Fees</b>	<b>\$</b>	<b>2.90</b>
Postmark or Date APR 1995		

P 622 713 447

US Postal Service  
Receipt for Certified Mail

Murchison Oil & Gas Inc.  
Attn: Mike Daugherty  
1st Interstate Bank Tower  
Ste 5300, 1445 Ross Av  
Dallas, Tx 75202-2733

Postage	\$	✓
Certified Fee		✓
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		✓
Return Receipt Showing to Whom, Date, & Addressee's Address		
<b>TOTAL Postage &amp; Fees</b>	<b>\$</b>	<b>2.90</b>
Postmark or Date APR 1995		

P 622 713 443

US Postal Service  
Receipt for Certified Mail

Damar Energy Co.  
Diamond Petroleum Group  
1416 J. Avenue  
Plano, TX 75074

Postage	\$	✓
Certified Fee		✓
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		✓
Return Receipt Showing to Whom, Date, & Addressee's Address		
<b>TOTAL Postage &amp; Fees</b>	<b>\$</b>	<b>2.90</b>
Postmark or Date APR 1995		

P 622 713 437

US Postal Service  
Receipt for Certified Mail

Keith Norvall  
P.O. Box 5151  
Carlsbad, NM 88221

Postage	\$	✓
Certified Fee		✓
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		✓
Return Receipt Showing to Whom, Date, & Addressee's Address		
<b>TOTAL Postage &amp; Fees</b>	<b>\$</b>	<b>2.90</b>
Postmark or Date APR 1995		

P 622 713 445

US Postal Service

**Receipt for Certified Mail**

Strata Production Co.

P.O. Box 1030

Roswell, NM 88202-1030

P 622 713 446

US Postal Service

**Receipt for Certified Mail**

Southwest Petroleum Corp.

P.O. Box 25623

Overland Park, KS 66225

Postage	\$	✓
Certified Fee		✓
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		✓
Return Receipt Showing to Whom, Date, & Addressee's Address		✓
TOTAL Postage & Fees	\$	2.72
Postmark or Date		APR 1995

PS Form 3800, April 1995

Postage	\$	✓
Certified Fee		✓
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		✓
Return Receipt Showing to Whom, Date, & Addressee's Address		✓
TOTAL Postage & Fees	\$	2.72
Postmark or Date		APR 1995

PS Form 3800, April 1995

## **D) PROOF OF LEGAL NOTICE**

# Affidavit of Publication

No 17917

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:

April 7, 19 96  
\_\_\_\_\_, 19\_\_\_\_  
\_\_\_\_\_, 19\_\_\_\_  
\_\_\_\_\_, 19\_\_\_\_  
\_\_\_\_\_, 19\_\_\_\_  
\_\_\_\_\_, 19\_\_\_\_

That the cost of publication is \$ 33.29,  
and that payment thereof has been made and will  
be assessed as court costs.

Amy McKay

Subscribed and sworn to before me this

8<sup>th</sup> day of April, 1996

Donna Crump

My commission expires 08/01/98  
Notary Public

April 7, 1996

## LEGAL NOTICE

Notice is hereby given of the application of Texaco Exploration & Production Inc., (Attention:

Terry L. Frazier, Area Manager, P.O. Box 730, Hobbs, New Mexico, 88240, Telephone (505) 393-7191), to the New Mexico Oil Conservation Commission, Energy and Minerals Department, for approval of the following well(s) to be utilized as a salt water disposal well for the purpose of disposing of produced fluids.

Texaco E & P Inc. plans to drill the subject well as a salt water disposal well in the Bell Canyon formation in the following well:

Lease/Unit Name: **Remuda Basin State SWD**

Well Number(s) and Location(s): 1 - Unit Letter F, 2625 FNL & 1500' FWL Section 19, T-23-S, R-30-E, Eddy County, New Mexico

The disposal formation will be the Bell Canyon at a depth from 3200 feet to 3900 feet below the surface of the ground. Expected maximum injection rate is 5000 barrels per day and expected maximum injection pressure is 640 pounds per square inch. Injection will be through cement lined or plastic coated tubing, below a packer at approximately 3150'. The system will be closed. This work is part of an ongoing development project. Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico, 87501, within fifteen (15) days of this publication.



TEXACO

## FAX TRANSMITTAL COVER SHEET

NOTE: DO NOT USE BLUE OR RED INK OR PENCIL ON THIS FORM. THEY WILL NOT REPRODUCE

DATE: 4/30 ☒ URGENT ☐ ROUTINE NO. OF PAGES 2+CMESSAGE TO: Michael Stogwer / Ben Stone -NMOC

TELEPHONE NO. \_\_\_\_\_ FAX MACHINE NO. \_\_\_\_\_

DEPT./DIV./SUBS. \_\_\_\_\_

LOCATION Santa Fe New Mexico ROOM NO. \_\_\_\_\_MESSAGE FROM: Michael Alexander

TELEPHONE NO. \_\_\_\_\_ FAX MACHINE NO. \_\_\_\_\_

DEPT./DIV./SUBS. \_\_\_\_\_

LOCATION Hobbs New Mexico ROOM NO. \_\_\_\_\_

SENDING DEPT. APPROVAL \_\_\_\_\_ TIME TRANSMITTED \_\_\_\_\_

☐ RETURN ORIGINAL VIA INTER-OFFICE MAIL☐ RETURN ORIGINAL CALL SENDER TO PICK UP

ADDITIONAL COMMENTS:

Re: Request for Drilling Permit  
at Non-Standard Location

All 40-acre offsets are operated  
by Texaco <sup>4/30/96</sup> Ben

No NBL Permit necessary for SWD Well.

04/30/96 12:19  
SENT BY:QDS

12:19

505 397 0450

4-30-96 12:34PM ; TEXACO E & P INC.-

002/003  
505 397 0450:# 2/ 3

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-103

Revised 1-1-89

Submit 3 copies  
to Appropriate  
District Office

**DISTRICT I**

P.O. Box 1980, Hobbs, NM 88240

**DISTRICT II**

P.O. Box Drawer DD, Artesia, NM 88210

**DISTRICT III**

1000 Rio Brazos Rd., Aztec, NM 87410

**OIL CONSERVATION DIVISION**

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

WELL API NO.

5. Indicate Type of Lease

STATE ☒

FEE ☐

6. State Oil / Gas Lease No.

E-5229

7. Lease Name or Unit Agreement Name

REMUDA BASIN '19' STATE SWD

8. Well No.

1

9. Pool Name or Wildcat

UNDESIGNATED BELL CANYON

**SUNDRY NOTICES AND REPORTS ON WELL**  
(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. Type of Well: OIL WELL ☐ GAS WELL ☐ OTHER SALT WATER DISPOSAL

2. Name of Operator

TEXACO EXPLORATION & PRODUCTION INC.

3. Address of Operator

P.O. Box 3109, Midland Texas 79702

4. Well Location

Unit Letter F : 1400 Feet From The NORTH Line and 2500 Feet From The WEST Line

Section 19 Township 23-S Range 30-E NMPM LEA COUNTY

10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3058'

11.

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

**NOTICE OF INTENTION TO:**

PERFORM REMEDIAL WORK ☐

PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐

CHANGE PLANS ☐

PULL OR ALTER CASING ☐

OTHER:

CHANGE OF LOCATION ☒

**SUBSEQUENT REPORT OF:**

REMEDIAL WORK ☐

ALTERING CASING ☐

COMMENCE DRILLING OPERATION ☐

PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: ☐

12. 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.

THIS WELL WAS MOVED 1225' NORTH AND 1000' EAST AT THE REQUEST OF THE OFFSET OPERATOR.

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

SIGNATURE

C. Wade Howard

TITLE

Eng. Assistant

DATE

4/30/96

TYPE OR PRINT NAME

C. Wade Howard

Telephone No.

688-4606

(This space for State Use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

DISTRICT I  
P. O. Box 1988, Santa Fe, NM 87504

DISTRICT II  
P. O. Box 1988, Santa Fe, NM 87504

DISTRICT III  
1000 Rio Grande St., Santa Fe, NM 87504

DISTRICT IV  
P. O. Box 1988, Santa Fe, NM 87504-8088

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 10, 1994

Instructions on back

Submit to Appropriate District Office

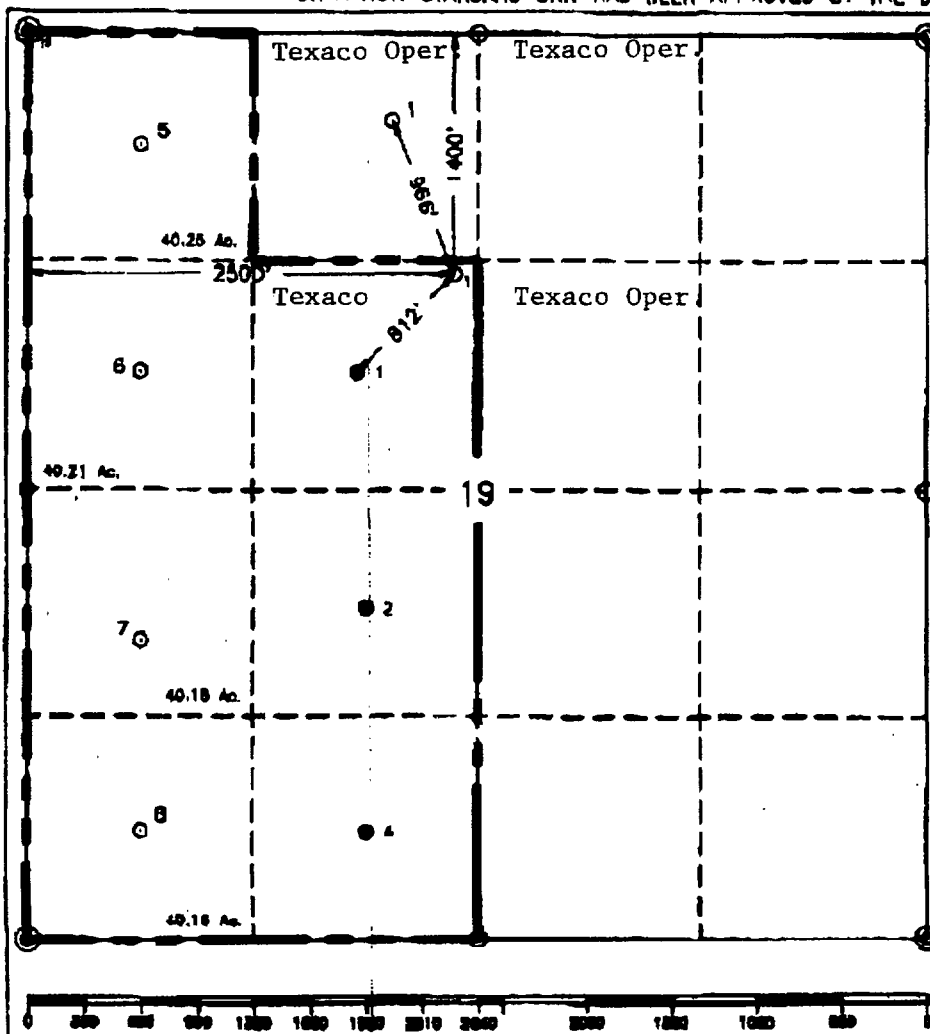
State Lease-4 copies  
Fee Lease-3 copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION FLAT

API Number		Well Code		Undesignated		Well Name		
Property Code 16858		Property Name Ramuda Basin #18 State SWD		Well Number 1		Well Elevation 3058'		
Operator No. 22351		Operator Name TEXACO EXPLORATION & PRODUCTION, INC.		Well Location Surface Location		Bottom Hole Location if Different From Surface		
UL or lot no. F	Section 19	Township 23-S	Range 30-E	Lot No. 1400'	North/South line North	East from the 2500'	East/West line West	County Eddy
UL or lot no.	Section	Township	Range	Lot No.	North/South line	East from the	East/West line	County
Dedicated Acres 40	Joint or Info	Conservation Code	Order No.					

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION.

	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and correct to the best of my knowledge and belief.</p> <p>Signature <i>C. Wade Howard</i></p> <p>Printed Name C. Wade Howard</p> <p>Position Engineer's Assistant</p> <p>Company Texaco Expl. &amp; Prod. Inc.</p> <p>Date May 1, 1996</p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.</p> <p>Date Surveyed April 30, 1996</p> <p>Signature &amp; Seal of Professional Surveyor <i>John S. Piper</i></p> <p>Certificate No. 7254 John S. Piper</p>

○ - Staked Location ● - Producing Well ⚡ - Injection Well ◊ - Water Supply Well ✖ - Plugged & Abandon Well  
⊙ - Found Section Corner, 2 or 5" Iron Pipe & GLO B.C. ○ - Found 1/4 Section Corner, 1" Iron Pipe & GLO B.C.



**NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

December 29, 1999

Texaco Exploration & Production, Inc.  
P.O. Box 730  
Hobbs, New Mexico 88241-0730

Attn: Mr. Darrell J. Carriger

**RE:    *Injection Pressure Increase,  
Remuda Basin 19 Federal Well No. 2,  
API No. 30-015-28901  
Eddy County, New Mexico***

Dear Mr. Carriger:

Reference is made to your request dated December 22, 1999 to increase the surface injection pressure on the above referenced well. This request is based on a step rate test conducted December 16, 1999. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following well:

<b><i>Well and Location</i></b>	<b><i>Maximum Injection Pressure</i></b>
Remuda Basin 19 Federal Well No. 2	1,250 PSIG
Located in Section 19, Township 23 South, Range 30 East, Eddy County, New Mexico.	

The Division Director may rescind these injection pressure increases if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

Lori Wrotenberg  
Director

LW/MWA/kv

cc:    Oil Conservation Division - Artesia  
Files: SWD-626, IPI 4<sup>th</sup> QTR 1999