RELEASE 8-9-93

July 22, 1993

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Attention: Ben Stone

Re: Request for Amendment to Expansion of Waterflood
WFX-646, approved July 1, 1993
Texaco Exploration and Production Inc.
West Dollarhide Drinkard Unit, Dollarhide Tubb-Drinkard
T-24/25-S, R-38-E, Lea County, New Mexico

Gentlemen:

Texaco Exploration and Production Inc. respectfully requests administrative approval to amend the waterflood expansion order WFX-646 on the West Dollarhide Drinkard Unit. Texaco E&P Inc. wishes to drill a replacement injection well offset to an existing injection well. The casing through the unitized interval in WDDU No. 61 has deteriorated beyond the possibility of repair. Well No. 61 will be properly plugged and abandoned prior to commencement of injection in the replacement well, WDDU No. 140.

Administrative approval is requested so that the necessary operations can be advanced in a prudent manner. If additional information is needed, please contact Robert McNaughton at 505-397-0428.

Yours very truly,

Terry L. Frazier
Hobbs Area Manager

TLF:rtm

attachments

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

FORM C-108
Revised 7-1-81

Amendment to WFX-646
West Dollarhide Drk. U.

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: Texaco Exploration & Production Inc.

Address: P.O. Box 730, Hobbs, New Mexico 88240

Contact party: Robert McNaughton Phone: 505-397-0428

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? [X] yes [ ] no
If yes, give the Division order number authorizing the project R-3768, WFX-608,621,630,646

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: Terry L. Frazier Title Area Manager

Signature: [signature] Date: 7/22/93

* 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. Amendment to WFX-646 submitted 5-24-93, approved 7-1-93

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

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.

7-22-93

NEW MEXICO OIL CONSERVATION DIVISION - Form C-108

Amendment to WFX-646

Unit Name: West Dollarhide Drinkard Unit, Lea County, New Mexico

Well numbers and locations of injection wells to be drilled:

140 - Unit Letter J, 1980 FSL & 1850 FEL, Section 32, T24S, R38E

III. All pertinent well data is included on the schematic sheets.

V. A lease map of wells within a 2 mile radius is attached. A 1/2 mile radius circle is drawn around the subject well and the amended area of review is also drawn. All of the pertinent wellbore data from the amended area of review was covered by the original application.

VI. Data for sections VI, VIII, X and XI have been previously submitted under NMOCD Order R-3768 dated May 21, 1969. Additional information was supplied on May 10, 1991 and June 23, 1991 as part of the 1991 waterflood expansion application (WFX-608). Additional information was supplied for the 1992 expansion (WFX-621) on December 19, 1991, and March 10, 1992. The current application (WFX-646) was approved July 1, 1993.

Five producers and two injection wells are now being drilled or completed. Another five producers and two injection wells are planned to be drilled in 1993. Construction and completion of these wells will be similar to the ones drilled in 1992.

Mexico J No. 2, WDDU No. 83 and WDDU No. 86 were recently plugged as designed with no problems being encountered. The subject well of this application, WDDU No. 140, is being drilled as a replacement for an existing injection well. The casing through the unitized interval in WDDU No. 61 WIW has deteriorated and is not repairable. Well bore schematics for the proposed plug and abandonment of No. 61 are attached.

VI. The second attached map also shows the approximate locations of the 1993 infill wells and proposed conversions. Of the previous conversion packages, WDDU wells No. 28, No. 46 and No. 68 have been completed, while No. 60, No. 88 and No. 89 are in progress. The infill injection wells will be drilled to replace original unit wells that were plugged. Three wells have received approval to be drilled as injection wells. WDDU No. 122 was completed in January, 1993. No. 120 is being drilled now and No. 121 is being completed now.

NEW MEXICO OIL CONSERVATION DIVISION - Form C-108

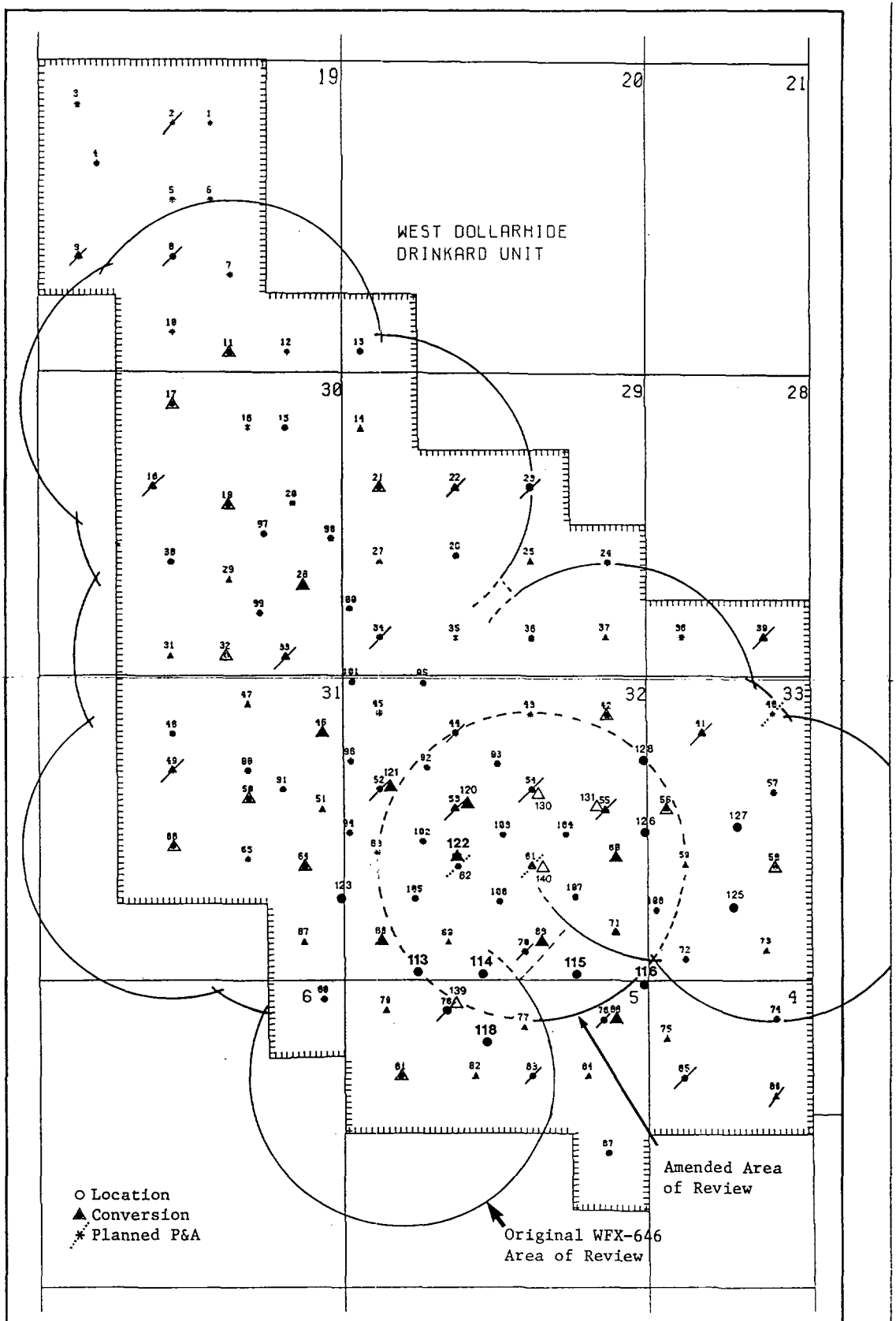
West Dollarhide Drinkard Unit, Dollarhide Tubb Drinkard

VII. Proposed average daily injection rate per well is 400 Bbls per day and anticipated maximum rate is 600 Bbls per day. Maximum pressure will not exceed 1700 psi system working pressure. The initial average injection pressure will not exceed approximately 1300 psi (.2 psi/ft). A step rate test will be run to establish a higher limit with the authorization of the NMOCD. The system will be closed.

IX. Subject wells will be stimulated in stages with 1000 to 5000 gallons 15% NEFE and/or DiKlor as needed. Rock salt blocks or ball diverters will be used as well as scale inhibitor chemicals.

XII. Based on current geological and engineering data and a petrophysical rock-properties log, there is no evidence of natural or artificially induced open faults within the unitized interval or above. There is no communication between the injection zone and any subsurface source of drinking water.

AREA OF REVIEW MAP



LEGEND

*DRINKARD PRODUCER

▲DRINKARD INJECTOR

*INAC/P&A

STATUTE MILES 0 .1 .2 .3 .4 .5 STATUTE MILES

FEET 0 1000 2000 3000 4000 5000 FEET

1:12000

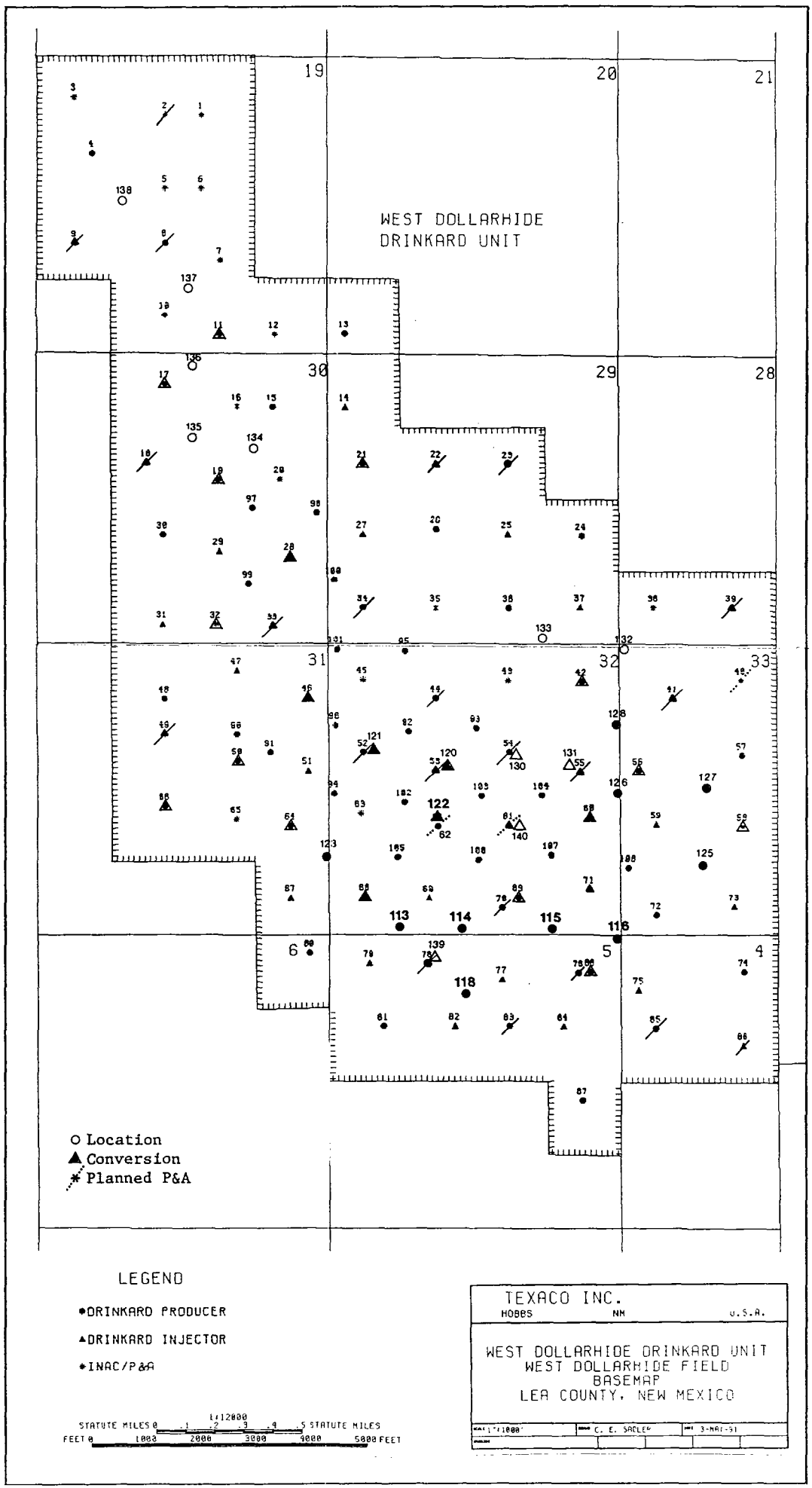
TEXACO INC.

HOBBS NM U.S.A.

WEST DOLLARHIDE DRINKARD UNIT
WEST DOLLARHIDE FIELD
BASEMAP
LEA COUNTY, NEW MEXICO

MAP 1"=1000'	DRWN C. E. SADLER	DATE 3-MAY-91

1993 STAKED LOCATIONS



PO-108
(7/93)

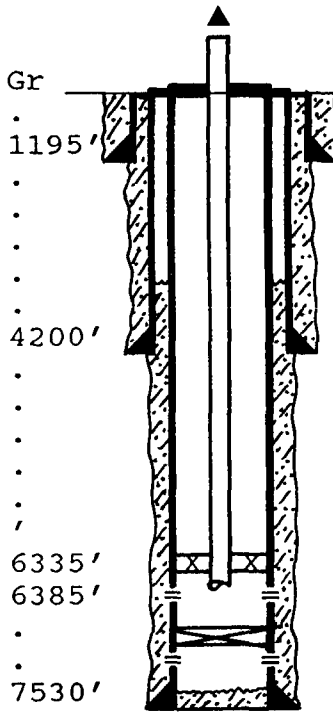
INJECTION WELL DATA SHEET

OPERATOR: Texaco Exploration & Production Inc **WELL:** West Dollarhide Drinkard Unit **#140**

FOOTAGE LOCATION: 1980 FSL, 1850 FEL **Sec./Twn/Rng:** Unit J, Sec 32, T-24-S, R-38-E

Redrill replacement for WDDU #61 injection well to be P&A. Lea County, New Mexico

SCHEMATIC



* Lower Abo may be production tested

** If no Queen flow is encountered, the intermediate casing may not be run. The production casing weight may be upgraded and the cement will be circulated.

TABULAR DATA

Surface Casing: Set at: 1195'

Size 11-3/4, 42# Cemented with 700 sx.

TOC surface ' determined by circulation

Hole Size 14-3/4" Comp. Date _____

Intermediate casing: Set at: 4200'

Size 8-5/8", 32# Cemented with 1350 sx.

TOC surface ' determined by circulation

Hole Size 11"

Production Casing: Set at: 7530'

Size 5-1/2", 15.5&17# Cemented with 950 sx.

TOC 3000+ ' determined by calculation

Hole Size 7-7/8

Approximate Injection Interval:

6385 ' to 6550 ' through: perforations

Tubing: 2-3/8", 4.7#, J-55, HDPE, 2000# WP

PO-113
(7/93)

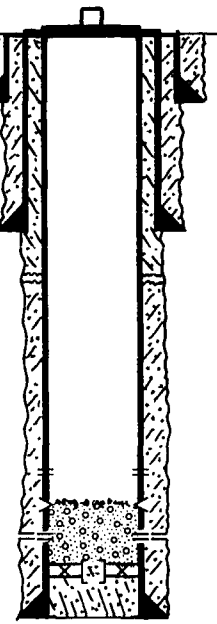
WELL DATA SHEET

OPERATOR: Texaco Exploration & Production Inc **WELL:** West Dollarhide Drinkard Unit #61

FOOTAGE LOCATION: 1980 FSL,1980 FEL **Sec./Twn/Rng:** Unit J, Sec 32, T-24-S, R-38-E

Former Skelly Oil Company Mexico J #9 Lea County, New Mexico

SCHEMATIC



KB = 14′
Gr 3181′ GL

250′ 13-3/8", 36#, 250 sx, cement circ.

3150′ 9 5/8, 36#, 1800 sx, cement circulated

3690′ primary TOC, annulus sqzd 600 sx, cement circulated, 4-16-79

6137′ Sqzd Tubb perfs
6392′ bad casing
6560′ Drinkard perfs
6732′ Retainer, PBTD 6600′
6902′ 5-1/2", 17#, 450 sx, TOC @ 3660′ by CBL

Tops:

Salt	1271′-2550′
Queen	3629′-3824′
Tubb	6048′
Drinkard	6387′
Abo	6610′

TABULAR DATA

Surface Casing: Set at: 250′

Size 13-3/8, 36# Cemented with 250 sx.

TOC surface ′ determined by circulated

Hole Size 18" Comp. Date 9-15-53

Intermediate casing: Set at: 3150′

Size 9-5/8", 36# Cemented with 1800 sx.

TOC surface ′ determined by circulated

Hole Size 12-1/4", Annulus Sqzd 600 sx, 4/79

Production Casing: Set at: 6902′

Size 5 1/2, 17# Cemented with 450 sx.

TOC 3660/surf. ′ determined by CBL/ Sqz.

Hole Size 7 7/8, Tubb prefs Sqzd 2/72

Injection Interval:

6560 ′ to 6586 ′ through: Perforations

** SQZD perfs from 6441-6574′ taking fluid

PO-113
(7/93)

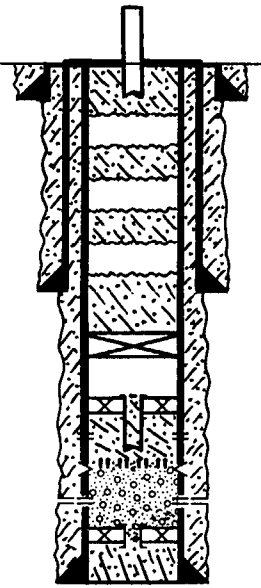
Recommended Plug and Abandonment

OPERATOR: Texaco Exploration & Production Inc. **WELL:** West Dollarhide Drinkard Unit #61

FOOTAGE LOCATION: 1980 FSL, 1980 FEL **Sec./Twn/Rng:** Unit J, Sec 32,T-24-S, R-38-E

Last injection: 11-85. Lea County, New Mexico

SCHEMATIC



Gr

250′ surface plug, 30 sx

1270′ T/ Salt, 15 sx

2550′ B/ Salt, 15 sx

3150′

3800′ CIBP, 90 sx, 700′

6100′ **Retainer, 100 sx**

6137′ w/ 150′+ tail pipe

6392′ Collapsed casing,

6560′ scale, formation

6732′ Retainer, 200 sx

6902′

TABULAR DATA

Surface Plug:

Size 300′-surface Cemented with 30 sx.
1320′-1220′ 15
2600′-2500′ 15
class "C" cement, 1.32 ft^3/sx

Intermediate Plugs:

Size CIBP , Cemented with 90 sx.
3800′-3100′

Producing Zone Plugs:

Size Retainer Cemented with 100 sx.